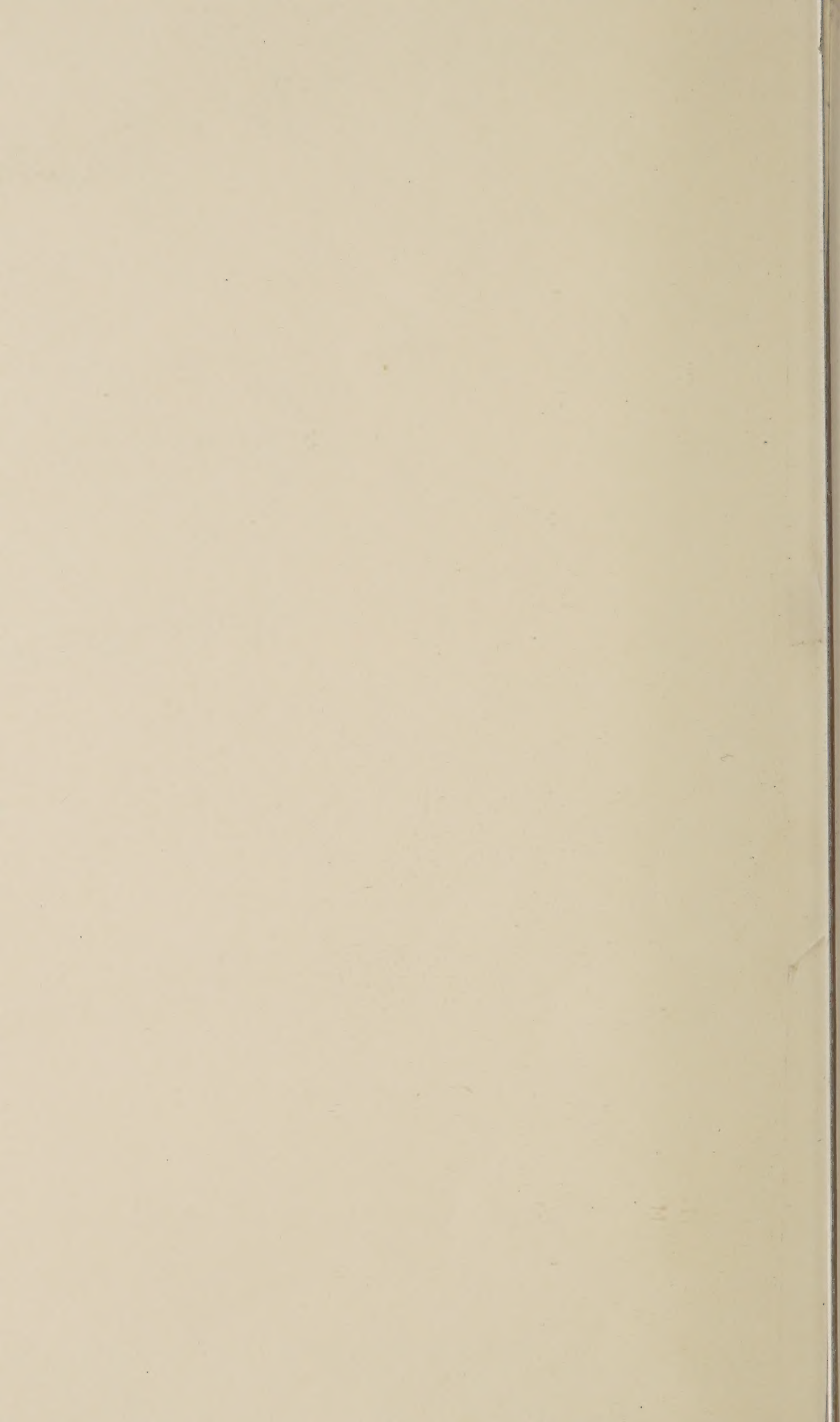


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United States Department of Agriculture,

DIVISION OF PUBLICATIONS,

WASHINGTON, D. C., *January 30, 1897.*

MONTHLY LIST OF PUBLICATIONS.

[January, 1897.]

(See appended notes regarding Department publications.)

Nomenclature of the Arborescent Flora of the United States. By Geo. B. Sudworth, Dendrologist of the Division of Forestry. Pp. viii, 419. (Bulletin No. 14, Division of Forestry.) Price 25 cents.

CONTENTS : Introduction by B. E. Fernow—Prefatory remarks by George B. Sudworth—Catalogue of the Arborescent Flora of the United States—Appendix: Code of the Paris Congress of Botanists; Code of the American Botanists; Code of the Ornithologists' Union.

The object of this bulletin is to pave the way toward establishing, as far as possible, a uniform and stable use of names, both scientific and vernacular, of our native trees, and thus avoid the confusion which has often arisen both in technical writings and commercial transactions from a lack of such a uniform nomenclature.

Contributions from the U. S. National Herbarium, Vol. V, No. 1. General Report on a Botanical Survey of the Cœur D'Alene Mountains in Idaho During the Summer of 1895. By John B. Leiberger. Pp. v, 85, 1 map. Price 10 cents.

An account of the itinerary made in that portion of the Bitter Root Mountains of northern Idaho known as Cœur D'Alenes, a fair representation of the whole region, and being heavily timbered the economic part of the report deals largely with trees. The topography, climate, mineral deposits, agricultural capacity, native food plants, forest resources, forest destruction and preservation are discussed, and a new system of timber protection suggested.

Food and Nutrition Investigations in New Jersey in 1895 and 1896. By Edward B. Voorhees, A. M., Director New Jersey Agricultural Experiment Stations and Professor of Agriculture, Rutgers College, New Brunswick, N. J. Pp. 40. (Bulletin No. 35, Office of Experiment Stations.) Price 5 cents.

The subjects of this investigation were: (1) The composition and cost of bread in New Jersey, (2) bakery experiments, (3) the composition and cost of milk in cities in New Jersey, and (4) a dietary study. The objects of this work were to secure (1) definite data in regard to the variations in the cost per pound of bread, and (2) positive information concerning the variations that exist in the composition of bread and the relative cost per pound of the nutrients contained in it.

Changes in and Additions to Methods of Analysis Adopted at the Thirteenth Annual Meeting of the Association of Official Agricultural Chemists. Pp. 6. (Circular No. 2, Division of Chemistry.)

This circular embraces the changes in and additions to methods of analysis adopted at the meeting of the Association of Official Agricultural Chemists held at Washington, D. C., November 6 to 9, 1896. They are to be used as complementary to the official methods published in Bulletin No. 46, Division of Chemistry.

Highway Repairing. Pp. 12. (Circular No. 24, Office of Road Inquiry.)

CONTENTS: Practical results of the daily care of common roads, by J. O. Sanford, Vermont Board of Agriculture—The Canandaigua roads, by E. G. Harrison, C. E., Special Agent—Road repairs and the cash tax in Wisconsin, Iowa, and Indiana; letters from men in various parts of those States.

Some Insects Injurious to Stored Grain. By F. H. Chittenden, Assistant Entomologist. Pp. 24, figs 18. (Farmers' Bulletin No. 45, Division of Entomology.)

This bulletin treats of a subject of great importance to farmers, millers, dealers in produce, and others throughout the whole country who produce, handle, or store grain. Vast quantities of wheat, corn, rice, flour, etc., are yearly destroyed or greatly damaged by the attacks of various kinds of insects. The author of this bulletin describes and illustrates these pests, and suggests remedies for their prevention and destruction. He also speaks of the parasites of these insects, without which the pests would increase at a rate almost beyond calculation.

The Carbohydrates of Wheat, Maize, Flour, and Bread, and the Action of Enzymic Ferments upon Starches of Different Origin. By Winthrop E. Stone, Ph.D., Professor of Chemistry of Purdue University. Pp. 44. (Bulletin No. 34, Office of Experiment Stations.) Price 5 cents.

A technical bulletin reporting special investigations made by the author as a part of the nutrition investigations of the Department.

In the first part of this bulletin the author reports the determination of sucrose, invert sugar, dextrin, starch, pentosans, and hemicelluloses, and fiber in winter and spring wheat, corn, flour from winter and spring wheat, corn meal, and the bread made from the flours and meal. He found that the sum of the carbohydrates actually determined was considerably less than the nitrogen-free extract as ordinarily determined. This discrepancy is not accounted for. The variations in the amount of the different carbohydrates in unground grains and in the flour and meal and bread made therefrom are discussed, as well as the changes which flour and meal undergo in baking.

In the second part of the bulletin is given the action of the enzymic ferments (diastase, salivary enzymes, pancreatic enzymes, and "Taka-diastase") upon the starches of potato, sweet potato, maize, rice, and wheat. It was found that the various starches vary greatly in their susceptibility to the action of enzymic ferments, some requiring eighty times as long for complete solution or saccharification as others under the same conditions. It seems reasonable to assume from these investigations that the starches would exhibit the same differences when subjected to the action of the same enzymes in the processes of digestion.

Exports of Animals and their Products. By Dr. D. E. Salmon, Chief Bureau of Animal Industry. Pp. 3. (Circular No. 17, Bureau of Animal Industry.)

A review of the export trade in animals and their products during the years 1889-1896. Comparative statements are given of the exports of American live cattle and beef products, of horses, mules, sheep, mutton, dairy products, sole leather, and of live hogs and hog products to all countries and to the United Kingdom, together with the value of the products exported.

Agricultural Products Imported and Exported by the United States in the Years Ended June 30, 1892 to 1896, inclusive. Pp. 8. (Circular No. 11, Section of Foreign Markets.)

This circular presents in a compact form, for comparison, a detailed statement of the quantities and values of agricultural products imported and exported by the United States during each year from 1892 to 1896, inclusive. In connection with this statement a table is given showing the relation that the imports and exports of agricultural products bore, respectively, to the total imports and exports in each of the five years under consideration, and also the extent to which the agricultural exports exceeded the agricultural imports.

The Publication Work of the Department of Agriculture as Affected by the Law of January 12, 1895. Pp. 4. (Circular No. 218, Division of Publications.)

The Cotton Crop of 1895. Pp. 15. (Circular No. 4, Division of Statistics.)

Contains statistics relating to the cotton crop of 1895, derived from complete and revised statements furnished to the Department by railway and water transportation companies and by officials of cotton mills in Southern States. The movements of cotton by rail, river, and wagon are given for the cotton-producing States. The circular also contains a table showing the comparative acreage and production of cotton for the years 1889-1895, showing the changes that have taken place in each State and Territory since the crop of 1889-90. A table giving the value of the crop for 1895 is also included.

Monthly Weather Review—November, 1896. Vol. XXIV, No. 11. Pp. 397-442, charts 9. Price 10 cents.

Charts of the Weather Bureau.

Snow and ice charts for Monday, January 4, 11, 18, 25.

Climate and Crop Bulletin (series of 1896), reporting temperature and rainfall, with special reference to their effect on crops. (No. 32, for the month of December, 1896.)

Daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

NOTES REGARDING DEPARTMENT PUBLICATIONS.

The publications of the United States Department of Agriculture are of three classes: (1) Serial publications; (2) scientific and technical reports; and, (3) popular bulletins.

The first two classes are issued in limited editions and are not intended for general distribution, being particularly designed for scientific students and for libraries and institutions of learning. They are distributed free only to persons cooperating with or rendering the Department some service. Sample copies will be sent if requested, but miscellaneous applicants to receive the same regularly or for occasional copies must apply to the Superintendent of Documents, Union Building, Washington, D. C., to whom all publications not needed for official use, except circulars and bulletins printed by law for free distribution, are turned over in accordance with the following provision of the act providing for the public printing and binding and the distribution of public documents, viz:

SEC. 67. All documents at present remaining in charge of the several Executive Departments, bureaus, and offices of the Government not required for official use shall be delivered to the Superintendent of Documents, and hereafter all public documents accumulating in said Departments, bureaus, and offices not needed for official use shall be annually turned over to the Superintendent of Documents for distribution or sale.

The Farmers' Bulletins treat in a practical manner of subjects of particular interest to farmers, and are issued with a view to the widest possible circulation. These bulletins and circulars of information are free, two-thirds of them being set aside under the law for distribution through Senators, Representatives, and Delegates in Congress. Applications may be addressed to the Secretary of Agriculture, stating both the **Number** and **title** of the publication desired.

The Department has no list to whom all publications are sent; the variety of the subjects treated naturally restricts the distribution of most of them to the sections of country to which they are especially suitable and to specialists. The Monthly List of Publications, issued the first of each month, will be mailed to all who apply for it. In it the titles of the publications are given with a note explanatory of the character of each, thus enabling the reader to make intelligent application for such bulletins and reports as are certain to be of interest to him.

The Department can not undertake to furnish complete sets of either Farmers' Bulletins or other publications.

For the maps and bulletins of the Weather Bureau requests and remittances should be directed to the Chief of that Bureau.

For publications mentioned in the Monthly List preceding, **to which a price is attached** (with the exception of those issued by the Weather Bureau), application must be made to the

SUPERINTENDENT OF DOCUMENTS,

UNION BUILDING,

WASHINGTON, D. C.,

accompanied by the price thereof as fixed by him in accordance with the provisions of sections 61 and 67 of the act providing for the public printing and binding, and the distribution of public documents, approved January 12, 1895, and all remittances should be made to him and **not** to the Department of Agriculture; such remittances should be made by postal money order and not by private check or postage stamps.

The Superintendent of Documents is not permitted to sell more than one copy of any public document to the same person.

The Superintendent of Documents is not an official of the Department of Agriculture.

Applications for all other publications should be addressed to the Secretary of Agriculture, Washington, D. C.

Do not inclose stamps when writing to the Department about publications; it is not necessary in order to secure a reply.

Please advise the Department of any change of address.

United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., February 27, 1897.

MONTHLY LIST OF PUBLICATIONS.

[February, 1897.]

NOTE—Application for publications to which a price is affixed should be made, inclosing the amount, to the SUPERINTENDENT OF DOCUMENTS, UNION BUILDING, WASHINGTON, D. C.

Dairy Schools. By R. A. Pearson, B. S., Assistant Chief of Dairy Division, under the direction of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry. Pp. 38, plates 4, figs. 2. (Bulletin No. 17, Bureau of Animal Industry.) Price 10 cents.

A bulletin setting forth the advantages of an education at a dairy school, and giving the methods adopted by some of the most successful ones of the country.

Report of Committee on Methods of Teaching Agriculture. Pp. 20. (Circular No. 32, Office of Experiment Stations.)

A brief progress report of a committee appointed by the Association of American Agricultural Colleges and Experiment Stations, showing the lack of a standard of collegiate education in agriculture in this country, and urging the necessity of a more definite nomenclature of the branches of agricultural education. Accompanying the report are papers on some features of European institutions for agricultural education by A. C. True, and notes on agricultural education in the Scandinavian countries by F. W. Woll.

Storms, Storm Tracks, and Weather Forecasting. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Frank H. Bigelow, Professor of Meteorology. Pp. 87, charts 20. (Bulletin No. 20, Weather Bureau.) Price 10 cents.

The purpose of this bulletin is to present the latest phases of the science of meteorology as regards practical forecasting of weather conditions, and will be of use to teachers and students of meteorology.

Civil Service in the Department of Agriculture. Pp. 10. (Circular No. 33, Office of Experiment Stations.)

An address delivered by the Assistant Secretary of Agriculture before the Association of American Agricultural Colleges and Experiment Stations at Washington, D. C., November 12, 1896, which gives details of the workings of the civil service in the Department and makes some suggestions as to changes in future examinations for places in that Department which might be an improvement upon the present system and result in securing still more efficient service.

The Cheese Industry of the State of New York. By B. D. Gilbert, special expert agent, Dairy Division, under the direction of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry. Pp. 54. (Bulletin No. 15, Bureau of Animal Industry.) Price 5 cents.

Another of the series of bulletins on the subject of cheese making, and is devoted principally to the history and statistics of that industry in the Empire State.

Experiment Station Record, Vol. VIII, No. 4. Pp. i-viii, 269-354. Price 10 cents.

Experiment Station Record, Vol. VIII, No. 5. Pp. i-vi, 355-444. Price 10 cents.

Experiment Station Record, Vol. VII, No. 12. Pp. 997-1092, i-xii.
Price 5 cents.

This number (12) comprises an index to Vol. VII of names, subjects, and publications abstracted, thus completing the volume.

The Record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations.

NOTE.—For the convenience of those who desire to receive this publication regularly the Superintendent of Documents has decided to fix the price per volume (12 numbers), beginning with Vol. VIII, at \$1, payable in advance.

Brick Paving for Country Roads. Pp. 7, figs. 6. (Circular No. 25, Office of Road Inquiry.)

This circular gives details of the construction of the first road in this country to be paved with bricks—one in Warren County, Ill.—also several illustrations of cross sections of roadways in which bricks were used in their construction.

Freight Charges for Ocean Transportation of the Products of Agriculture. October 1, 1895, to October 1, 1896. Pp. 53. (Miscellaneous series, Bulletin No. 12, Division of Statistics.) Price 5 cents.

This publication gives the freight charges for the principal products of agriculture from American to European ports; also similar charges for coast-wise transportation between ports located in the United States. It also shows the total value of products of domestic origin exported during the fiscal year ending June 30, 1895, and the respective percentages of such shipments from the ports of the country. An article by the consul-general of the United States at Bristol, England, is appended touching upon the policy of English railway managers toward the agriculturists of that country.

Operations of the Bureau of Animal Industry. Pp. 51. (Senate Document No. 45, Fifty-fourth Congress, second session.)

This is a letter from the Secretary of Agriculture to the President of the Senate, giving a statement of the operations of the Bureau of Animal Industry for the fiscal year ending June 30, 1896, in compliance with the requirements of the law establishing that Bureau. Information as to the workings of that branch of the Department is given under the following captions: Meat inspection; microscopic inspection of pork; inspection of vessels and export animals; Southern cattle inspection; inspection and quarantine of imported animals; work of Pathological Division; work of Dairy Division; publications; also a list of persons employed and disbursements made during the fiscal year ended June 30, 1896.

Crop Report for December, 1896. Pp. 16. (Report No. 144, new series, Division of Statistics.)

This report gives a review of crop conditions for the whole year 1896, estimates of the product and value of nine of the most important crops of the year, notes on farm prices, a statement of the condition of the winter grain—crop of 1897—together with meteorological records.

Insects Affecting the Cotton Plant. By L. O. Howard, Ph.D., Entomologist. Pp. 32, figs. 18. (Farmers' Bulletin No. 47.)

Contains brief descriptions of the most important of the insects that affect the cotton plant, including the cotton worm, or caterpillar, the cotton bollworm, and the Mexican cotton-boll weevil, especially as regards their general appearance, habits, and life history, natural parasites, and the remedies to be applied.

Progress of Road Construction in the United States. Pp. 48. (Bulletin No. 19, Office of Road Inquiry.) Price 5 cents.

Condensed report of the proceedings of the National Road Parliament held at Atlanta, Ga., October 17-19, 1895. Twenty-seven States were represented, and the delegates reported the progress made in the construction of improved roads in their respective localities, together with the methods by which such improvements were attained and the cost of the same.

Studies on American Grasses. Pp. 43, plates 5, figs. 15. (Bulletin No. 4, Division of Agrostology.) Price 10 cents.

Comprises six technical papers on grasses, as follows: I.—The Genus *Ixophorus*, by F. Lamson-Scribner; II.—A list of the grasses collected by Dr. E. Palmer in the vicinity of Acapulco, Mexico, 1894-95, by F. Lamson-Scribner; III.—Some Mexican Grasses collected by E. W. Nelson in Mexico, 1894-95; IV.—Some American *Panicums* in the Herbarium Berolinense and in the Herbarium of Wildenow, by Theo. Holm; V.—Native and Introduced Species of the Genera *Hordeum* and *Agropyron*, by F. Lamson-Scribner and Jared G. Smith; VI.—Miscellaneous Notes and Descriptions of New Species.

Insects Affecting Domestic Animals: An Account of the Species of Importance in North America, with mention of related forms occurring on other animals. Prepared under the direction of the Entomologist, by Herbert Osborn, Professor of Zoology and Entomology, Iowa Agricultural College. Pp. 302, pls v, figs. 170. (Bulletin No. 5, new series, Division of Entomology.) Price 20 cents.

A discussion of those insects which by direct attack upon domesticated animals render themselves an injurious element to the stock-breeder, poultry-raiser, and keeper of various animals for pleasure or profit. The nine chapters of this bulletin are headed as follows: Introduction; Diptera (mosquitoes, gnats, flies, and ticks); Siphonaptera (fleas); Hemiptera (bugs and lice); Suborder Mallophaga (bird lice); Arachnida; Remedies—preventive treatment; List of parasites according to hosts; Literature.

Report of the Secretary of Agriculture; being part of the message and documents communicated to the two Houses of Congress at the beginning of the Fifty-fourth Congress. Pp. 317. (Congressional publication.)

Part 1 of the annual report of the Secretary of Agriculture, otherwise known as the business or executive report of the Secretary. It embraces the preliminary report of the Secretary to the President, November 16, 1896, and reports of twenty chiefs of bureaus, offices, and divisions for the fiscal year ending June 30, 1896. The reports are routine in character, being intended principally for Congress, and are printed as part of the President's message, a limited number of which are allotted to the Department, and the distribution is confined chiefly to correspondents and employees of the Department.

The Manuring of Cotton. Condensed from an article by H. C. White, Ph. D., in Bulletin No. 33, Office of Experiment Stations. Pp. 16. (Farmers' Bulletin, No. 48.)

CONTENTS: The draft of the cotton plant upon the fertility of the soil—Experiments on the manuring of cotton—Yield and profit from the use of fertilizers on cotton as compared with yield and profit from unfertilized soil—Comparative values of commercial fertilizers and home manures—Kind of fertilizer (chemical manure) required by or best suited to cotton—The amount of fertilizer per acre giving best results—Best mode of application of fertilizers to cotton—Best time of application of fertilizers to cotton—Miscellaneous experiments—General conclusions.

Some Miscellaneous Results of the Work of the Division of Entomology. Prepared under the direction of L. O. Howard, Entomologist. Pp. 87, figs. 44. (Bulletin No. 7, new series, Division of Entomology.) Price 10 cents.

The following subjects are dealt with in more or less detail: The ambrosia beetles of the United States—Grasshopper report for 1895—Grasshopper report for 1896—Some insects affecting the hop plant—The plum plant-louse—The rose-leaf beetle—A case of excessive parasitism—The walnut spanworm—Insect injury to chestnut and pine trees in Virginia and neighboring States—General notes—Notes from correspondence.

Sources of the Principal Agricultural Imports of the United States During the Five Years Ended June 30, 1896. Pp. 24. (Circular No. 12, Section of Foreign Markets.)

Enumerates the countries from which the more important agricultural products were imported into the United States during the last five years. Two series of tables are given, one comprising the values, and the other the quantities of the articles imported, and cross-references afford easy method of comparison.

Grasses and Forage Plants of the Dakotas. Compiled by Thomas A. Williams. Pp. 47, figs. 11. (Bulletin No. 6, Division of Agrostology.) Price 5 cents.

A report upon the grasses and forage plants and forage conditions of the Dakotas, based upon investigations of field agents in those States during the season of 1896. It is divided into three parts, (1) general notes on the forage conditions in the Dakotas, (2) alphabetical and descriptive list of grasses and forage plants in those States, (3) a classified list of grasses and forage plants, with occasional notes of botanical interest.

A Report Upon the Grasses and Forage Plants of the Rocky Mountain Region. By P. A. Rydberg and C. L. Shear. Pp. 48, figs. 29. (Bulletin No. 5, Division of Agrostology.) Price 5 cents.

A report embodying the field notes and general observations of the authors who as agents of the Department visited portions of Nebraska, Idaho, Montana, Utah, and Colorado, to collect live roots of grasses, grass seeds, etc., and to gather information relative to plants especially valuable during drought, for grazing, and the production of hay. There is appended, for the use of botanists, a list of the plants collected.

Wild Garlic. By Lyster H. Dewey, assistant in Division of Botany. Pp. 8, figs. 3. (Circular No. 9, Division of Botany.)

A condensed account of the origin of wild garlic and the introduction of the injurious weed into the United States. The weed is described, its distribution indicated on a map, its dissemination explained, and methods are given for its eradication. The circular also gives directions (by Maj. H. E. Alvord, Chief of Dairy Division) for deodorizing milk and avoiding the injurious effects of garlic upon dairy products.

Crop Report for January–February, 1897. By Henry A. Robinson, Statistician. Pp. 7. (Report No. 145, new series, Division of Statistics.)

The results of the year's returns relative to the number and value of domestic animals on farms and ranches in the United States up to January, 1897, are presented in this report; also a table giving the number and value of farm animals in the United States from 1868 to 1896. Notes as to the diminution, increase, or condition of the various animals accompany the tables.

The Mexican Cotton-boll Weevil. Pp. 8, figs. 5. (Circular No. 18, second series. Revision of No. 14, Division of Entomology.)

The author of this circular made a personal study of this pest of cotton in the Southwest, and furnishes a general history of its work and its life history. He also proposes some practical remedies for its prevention and destruction.

Monthly Weather Review—December, 1896. Vol. XXIV, No. 12. Pp. 443–485, charts 6. Price 10 cents.

Charts of the Weather Bureau.

Snow and ice charts for Monday, February 1, 8, 15, 22.

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall, with special reference to their effect on crops. (No. 1, for the month of January, 1897.)

Daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., March 31, 1897.

MONTHLY LIST OF PUBLICATIONS.

[March, 1897.]

(See appended notes regarding Department publications.)

Work and expenditures of Agricultural Experiment Stations. A Report by A. C. True, Ph.D., Director, Office of Experiment Stations. Pp. 68. (Senate Document No. 137, Fifty-fourth Congress, Second Session.)

Report of the Chief of the Weather Bureau—1895-'96. Pp. i-xl, 1-266, charts 8, pls. 4, figs. 5. Quarto. (Congressional publication.)

This report of the operations of the Weather Bureau during the year ended June 30, 1896, was printed by order of Congress, a limited number being placed at the disposal of the Bureau.

"The following topics are briefly treated in the first part of the report, viz: (1) New work undertaken with a view of improving the Weather Bureau service; (2) special improvements made during the year; (3) the preparation and distribution of forecasts and warnings. Part second consists of the usual meteorological tables for the calendar year 1895."

Crop Report for March, 1897. Pp. 4. (Report No. 146, new series, Division of Statistics.)

This is a report upon the distribution and quality of the corn, wheat, and oats crop of 1896.

Distribution of the Principal Agricultural Exports of the United States During the Five Years ended June 30, 1896. Pp. 24. (Circular No. 13, Section of Foreign Markets.)

This circular shows the quantity and value of the more important agricultural products of the United States shipped to each of the principal foreign countries during the years 1892-1896, with annual averages for the five year period, and also the percentages sent to each country.

Local Taxation as Affecting Farms. Pp. 16. (Circular No. 5, Division of Statistics.)

CONTENTS: Reasons for the investigation—Classification of taxable property—Previous investigations—The personal property tax—Conclusion.

The Clover Mite. By C. L. Marlatt, Assistant Chief Division of Entomology. Pp. 4, fig. 1. (Circular No. 19, second series, Division of Entomology.)

CONTENTS: Characteristics and method of work—Origin and distribution—Habits and life history—Remedies and preventives.

Dietary Studies at the Maine State College in 1895. By Whitman H. Jordan, M. S., Director Maine Agricultural Experiment Station and Professor of Agriculture, Maine State College. Pp. 57. (Bulletin No. 37, Office of Experiment Stations.) Price 5 cents.

This investigation may be termed a feeding experiment with man, as in it an attempt was made to control the sources of protein, which was furnished in cheap and in expensive forms. The influence of an abundance of milk in a dietary was also studied, and the results obtained were compared with those of a dietary study made under normal conditions.

CONTENTS: Introductory—The college commons and the conditions under which the experiments were made—The questions studied—The analyses of the raw materials, cooked foods, and wastes—The cost of raw materials—Data obtained in the dietary studies—Dietary study under ordinary conditions—Study of a dietary containing expensive protein—Study of a dietary containing cheap protein—Study of a dietary containing a limited supply of milk—Study of a dietary containing a large amount of milk—Discussion of the investigation and its results—Summary.

Summary of Mechanical Tests on Thirty-two Species of American Woods. By B. E. Fernow, Chief Division of Forestry. Pp. 12, diag. 2. Quarto. (Circular No. 15, Division of Forestry.)

This circular contains in a condensed form the results of the timber investigations carried on by the Division of Forestry. "It is a summary of the mechanical tests performed in the laboratory at St. Louis and is published in advance of a more detailed discussion in order to give an account of the amount of work performed, to exhibit the necessity for further work on most of the species investigated, and to place as quickly as possible the results within the reach of wood consumers."

Some Little-known Insects Affecting Stored Vegetable Products; A Collection of Articles Detailing Certain Original Observations Made upon Insects of this Class. By F. H. Chittenden, Assistant Entomologist. Pp. 45, figs. 10. (Bulletin No. 8, new series, Division of Entomology.) Price 5 cents.

This bulletin is a collection of accounts of observations made by one of the assistant entomologists in the progress of work in the preparation of a complete report on insects affecting stored vegetable products, and this partial report is published to give immediate information as to the important observations already made.

CONTENTS: Preface—A storehouse moth new to the United States, with notes on other species (illustrated)—Notes on grain beetles of the genus *silvanus* (illustrated)—Granivorous and other habits of certain dermestidæ (illustrated)—Weevils that affect the seed of the cowpea (illustrated)—Development of the common bean weevil—A little-known grain weevil—On the occurrence of the grain moth (*Tinea granella* L.) in America—An invasion of the coffee-bean weevil (illustrated)—Parasites of flour and meal moths (illustrated)—A foreign parasite of the grain weevils.

Standard Varieties of Chickens. By George E. Howard, Secretary of National Poultry and Pigeon Association. Pp. 48, figs. 42. (Farmers' Bulletin No. 51, Bureau of Animal Industry.)

Of the 87 standard varieties of chickens raised in this country, 44 are described in this bulletin. The former are divided into 10 classes, and these again placed under four general classes, viz: The general purpose breeds (American); the table breeds (Asiatic); the egg breeds (Mediterranean); and the ornamental breeds (the Polish, Exhibition Games, miscellaneous, and Bantams). The American class embraces: Barred, buff, pea-comb barred, and white Plymouth Rocks; silver, golden, white, buff, and black Wyandottes; black, mottled, and white Javas; American Dominiques, and Jersey Blues. In the Asiatic class are to be found light and dark Brahmas; buff, partridge, white, and black Cochins; black and white Langshans. The Mediterranean class includes the different strains of Leghorns, Minorcas, Andalusians, and Black Spanish.

Accessions to the Department Library (October–December, 1896),
Library Bulletin No. 14. Pp. 13.

Monthly Weather Review—Annual Summary for 1896. Vol. XXIV,
No. 13. Pp. 487–496, charts 5. Price 10 cents.

Charts of the Weather Bureau.

Snow and ice charts for Monday, March 1, 8, 15, 22, 29. (The last of this series for the season.)

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall, with special reference to their effect on crops. (No. 2, for the month of February, 1897.)

Daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

REPRINTS OF FARMERS' BULLETINS.

No. 15.—Some Destructive Potato Diseases: What They Are and How to Prevent Them. By B. T. Galloway, Chief of the Division of Vegetable Pathology. Pp. 8, figs. 3.

No. 29.—Souring of Milk and Other Changes in Milk Products. Prepared in the Office of Experiment Stations. Pp. 23.

No. 33.—Peach Growing for Market. By Erwin F. Smith, Division of Vegetable Physiology and Pathology. Pp. 24, figs. 21.

No. 34.—Meats: Composition and Cooking. By Charles D. Woods, Office of Experiment Stations. Pp. 29, figs. 4.

No. 35.—Potato Culture. By J. F. Duggar, Office of Experiment Stations. Pp. 24, figs. 2.

No. 37.—Kafir Corn: Characteristics, Culture, and Uses. By C. C. Georgeson, Professor of Agriculture in Kansas State Agricultural College. Pp. 12, fig. 1.

No. 40.—Farm Drainage. By C. G. Elliott, C. E., Member of the American Society of Civil Engineers, Peoria, Ill. Pp. 24, figs. 6.

No. 41.—Fowls: Care and Feeding. By G. C. Watson, B. Agr., M. S., Professor of Agriculture in Pennsylvania State College and Agriculturist of the Pennsylvania Agricultural Experiment Station. Pp. 24, figs. 4.

No. 44.—Commercial Fertilizers: Composition and Use. By Edward B. Voorhees, M. A., Director of the New Jersey Agricultural Experiment Stations and Professor of Agriculture in Rutgers College, under the supervision of the Office of Experiment Stations. Pp. 24.

No. 45.—Some Insects Injurious to Stored Grain. By F. H. Chittenden, Assistant Entomologist. Revised edition. Pp. 24, figs. 18.

No. 46.—Irrigation in Humid Climates. By F. H. King, Professor of Agricultural Physics, College of Agriculture, University of Wisconsin, and Physicist of the Wisconsin Agricultural Experiment Station, under the supervision of the Office of Experiment Stations. Pp. 27, figs. 4.

NOTES REGARDING DEPARTMENT PUBLICATIONS.

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UNION BUILDING,

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Please advise the Department of any change of address.

United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., April 30, 1897.

MONTHLY LIST OF PUBLICATIONS.

[April, 1897.]

(See accompanying notes regarding Department publications.)

Cost of Hauling Farm Products to Market or to Shipping Points in European Countries. Pp. 12. (Circular No. 27, Office of Road Inquiry.)

A compilation of extracts from consular officers of the United States stationed at various places in Europe, giving detailed accounts of the cost of transporting farm produce by other means than railways and canals.

The Mexican Cotton Boll Weevil (*Anthonomus grandis* Boh.) By L. O. Howard, Chief of the Division of Entomology. Pp. 11, figs. 5. (Circular No. 18, new series, Division of Entomology, German edition.)

CONTENTS: Scope of the circular—General appearance—Method of work—Distribution—Work of the weevil in 1896—Natural history and habits—Popular names—Parasites and natural enemies—Remedies.

Hamburg as a Market for American Products. Pp. 10. (Circular No. 14, Section of Foreign Markets.)

This circular gives total imports and exports, and imports and exports from and to the United States for the city of Hamburg, Germany, together with a report of Consul W. Henry Robertson dated October 22, 1895, containing facts and suggestions relative to our trade with that city.

A Study in Insect Parasitism: A Consideration of the Parasites of the White-Marked Tussock Moth, with an Account of their Habits and Interrelations, and with Descriptions of New Species. By L. O. Howard, Entomologist. Pp. 57, figs. 24. (Bulletin No. 5, technical series, Division of Entomology.) Price 5 cents.

"An account of the principal factors which brought about the almost total disappearance of tussock-moth caterpillars on the shade trees in the city of Washington during the summer of 1896, after an extremely injurious outbreak of this insect, which took place during the summer of 1895. The details of this study may be considered in a degree typical of many sudden interruptions of the rapid multiplication of injurious species of insects."

Experiment Station Record, Vol. VIII, No. 6. Pp. i-vi, 445-538. Price 10 cents.

Experiment Station Record, Vol. VIII, No. 7. Pp. i-vi, 539-638. Price 10 cents.

The Record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations.

NOTE.—For the convenience of those who desire to receive this publication regularly the Superintendent of Documents has decided to fix the price per volume (12 numbers), beginning with Vol. VIII, at \$1, payable in advance.

Fig Culture. *Edible Figs: Their Culture and Curing*. By Gustav Eisen, Curator in Biology, California Academy of Sciences, San Francisco, Cal. *Fig Culture in the Gulf States*. By Frank S. Earle, Horticulturist, Alabama Experiment Station, Auburn, Ala. Pp. 32. (Bulletin No. 5, Division of Pomology.) Price 5 cents.

Mr. Eisen discusses the nature and structure of the flowers and fruit of the fig, the varieties useful in California, propagation, climate suitable for its growth, pruning, drying, packing, etc. Mr. Earle describes the cultivation and fertilization of the fig in the Southern States, its insect enemies and diseases, marketing figs, etc., and gives a list of the varieties of figs recommended by the American Pomological Society.

Sheep Feeding. By John A. Craig, Professor of Animal Husbandry in the University of Wisconsin. Pp. 24. (Farmers' Bulletin No. 49, Office of Experiment Stations.)

CONTENTS: Feeding breeding ewes—Winter, spring, summer, and fall feeding—Feeding lambs intended for breeding purposes—Feeding rams—Feeding lambs for market—Fattening lambs for early and fall markets—Shearing lambs before fattening—Fattening wether lambs to maturity.

Sorghum as a Forage Crop. By Thomas A. Williams, Assistant Agrostologist. Pp. 20, fig. 1. (Farmers' Bulletin No. 50, Division of Agrostology.)

CONTENTS: General characteristics and origin—Extent of cultivation in the United States—Varieties—Conditions of growth—Methods of culture—Yield—Value for forage—Chemical composition and digestibility—Objections sometimes urged against sorghum as a forage crop—Summary.

The Sugar Beet: Culture, Seed Development, Manufacture, and Statistics. By H. W. Wiley, Chief of the Division of Chemistry, and formerly director of the Department Sugar Beet Experiment Station in Nebraska. Pp. 48, figs. 24. (Farmers' Bulletin No. 52, Division of Chemistry.)

Among the topics treated are: Climatic conditions affecting the growth of the sugar beet—The theoretical beet-sugar belt of the United States—Growth of beets on irrigated lands—Varieties of beets—Soil—Fertilization—Precautions to be observed in applying stable manure—Quantities of plant food removed from the soil—Effect of nitrogenous manures on the quality of the beet—Rotation—Preparation of the land for planting—Cultivation—Position of the beet in the soil—Cost of growing beets—Harvesting—Siloing—Production of seed—Domestic production of beet seed—Production of commercial beets from a single high-grade beet—Comparative value of domestic and foreign-grown seed—Manufacture of sugar—Home manufacture of sugar—Waste products—Cost of manufacture—Cost of factory—Cooperative factories—Production of beet sugar in the United States from 1830 to 1897—Location of beet-sugar factories in the United States—World's sugar crop—Production of beet sugar in Europe for four years, 1893–1897—Number of factories, yield of beets per acre, and yield of sugar in the principal beet-sugar countries of Europe—Consumption of sugar in the United States—Consumption of sugar per head—Rate of increase in consumption.

The twenty-four figures illustrate typical specimens of varieties of beets, implements of cultivation, and machinery for extracting and refining the juice of the beets.

Nut Culture in the United States, Embracing Native and Introduced Species. (Special Report, Division of Pomology.) Pp. 144, pls. 16, figs. 2. Reprint. Price 30 cents.

General Index to the seven volumes of Insect Life. Pp. 145. (Division of Entomology.)

This publication is not for general distribution or sale, being intended for the use of entomologists and others having complete sets of Insect Life.

Crop Report for April, 1897. Pp. 8. (Circular No. 147, new series, Division of Statistics.)

CONTENTS: Condition of winter grain—Wheat and rye—Farm animals; general condition; losses during the year—Report of European agent.

The Strawberry Weevil. By F. H. Chittenden. Pp. 7. (Circular No. 21, second series, Division of Entomology.)

CONTENTS: General appearance and nature of attack—Food plants and ravages—Distribution and injuriousness—Natural history and habits—Natural enemies—Remedies.

Report of the Pomologist for 1895. By Samuel B. Heiges. Pp. 64, pls. 6. Price 15 cents.

CONTENTS: Work of the year—The fruit crop of the year 1895—Promising new fruits—Bud arrangement—Principles of pruning—Chinese persimmons—The Almond in Southwest Utah and Southeast Nevada, by Thomas Judd, of Utah—Small Fruit Culture, by James B. Gilchrist.

Addresses on Road Improvement in Maine, New York, North Carolina, and Illinois. By Roy Stone, Director Office of Road Inquiry. Pp. 26. (Circular No. 23, Office of Road Inquiry.)

Cereal Crops of 1896. Pp. 12. (Circular No. 6, Division of Statistics.)

CONTENTS: Distribution and quality of the corn crop of 1896—Distribution of the wheat crop of 1896—Distribution of the oat crop of 1896—Returns from mill and elevator correspondents—Wheat crop of the world—General notes—Report of European agent.

The Mississippi River Flood (prepared from material furnished by the Weather Bureau and Division of Statistics.) Pp. 6, fig. 1. (Miscellaneous circular No. 2, Division of Statistics.)

Report No. 2 on the same subject. Pp. 4, fig. 1. (Miscellaneous circular No. 3, Division of Statistics.)

These circulars contain maps showing the extent of overflowed country, the locations of the crevasses, and the lands not now under water but which have been submerged at previous periods of high water.

The value of the agricultural investments which are jeopardized, the value of the products from the submerged land last year, and other statistics are given.

How to Grow Mushrooms. By William Falconer, Superintendent Schenley Park, Pittsburg, Pa. Pp. 20, figs. 14. (Farmers' Bulletin No. 53, Division of Vegetable Physiology and Pathology.)

CONTENTS: Introduction—Raising mushrooms from spores, or seed spawn—Where to grow mushrooms—Manure—Preparing the beds—Spawning the beds—Loaming the beds—Temperature—Gathering the mushrooms—Sorting—Packing—Marketing—Renovating old or failing beds—Mushroom diseases—Insect and other animal enemies—Growing mushrooms in summer.

NOTE.—As a supplement to this treatise on mushroom culture there will be issued in a few months a bulletin devoted to means of identifying the edible and poisonous varieties.

The Castor Oil Plant. Pp. 4. (Miscellaneous circular No. 1.)

A short account of the history, cultivation, and uses of *Ricinus communis*, and a description of the several methods followed in expressing and refining its oil.

The Woolly Aphis of the Apple. By C. L. Marlatt, First Assistant Entomologist. Pp. 6, figs. 2. (Circular No. 20, second series, Division of Entomology.)

CONTENTS: General appearance and method of work—Origin and distribution—Natural history and habits—Remedies and preventives.

White Pine Timber Supplies—Letter from the Secretary of Agriculture transmitting to the Senate a report on the probable amount of white pine and other coniferous timber standing and its consumption in the United States. (Senate Document No. 40, Fifty-fifth Congress, first session.)

Proceedings of the Thirteenth Annual Convention of the Association of Official Agricultural Chemists held at Washington, D. C., November 6, 7, and 9, 1896. Edited by Harvey W. Wiley, Secretary of the Association. Pp. 127, figs. 5. (Bulletin No. 49, Division of Chemistry.) Price 10 cents.

Rules and Apparatus for Seed Testing. Pp. 9, figs. 2. (Circular No. 24, Office of Experiment Stations.)

A report of a committee appointed by the Association of American Agricultural Colleges and Experiment Stations at its meeting in Washington, D. C., November, 1896, "to devise and adopt a standard form of seed-testing apparatus and method of procedure for use in all American stations."

The Cotton Crop of 1896. Pp. 4. (Circular No. 7, Division of Statistics.)

A preliminary report upon the cotton crop of 1896-'97.

Notes on Irrigation in Connecticut and New Jersey. By C. S. Phelps, B. S., and Edward B. Voorhees, M. A. Pp. 64, figs. 7. (Bulletin No. 36, Office of Experiment Stations). Price 5 cents.

CONTENTS:—*Irrigation in Connecticut*: Introduction—Need of irrigation in Connecticut—Methods of irrigation in use in Connecticut—History of irrigation in Connecticut—Irrigation plants in use in Connecticut—Experiments on the effects of irrigation on strawberries—Suggestions regarding irrigation. *Irrigation in New Jersey*: Introduction—Need of irrigation in New Jersey—Amount of water necessary—Storage of water—Seepage—Cost of irrigation—Areas capable of being watered by gravity—Irrigation by pumping—Irrigation by wells—Warping—Water meadows—Total area irrigable—Estimated cost of irrigation and suggestions for small plants—Use of irrigation in New Jersey—Possibility of pumping large quantities of water from wells for irrigating purposes—Irrigation experiments in New Jersey.

Dietary Studies in New Mexico in 1895. By Arthur Goss, M. S., Professor of Chemistry, New Mexico College of Agriculture and Mechanic Arts. Pp. 23. (Bulletin No. 40, Office of Experiment Stations.) Price 5 cents.

CONTENTS:—The environment of the people among whom the studies were made—Mexican houses—Food used—Preparation of food—Miscellaneous—Character and scope of the studies—Analyses of foods—Dietary studies with Mexican families—Discussion of results.

Monthly Weather Review—January, 1897. Vol. XXV, No. 1. Pp. 1-42, charts 7. Price 10 cents.

Monthly Weather Review. February, 1897. Vol. XXV, No. 2. Pp. 43-84, charts 7. Price 10 cents.

Charts of the Weather Bureau.

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall, with special reference to their effect on crops. (No. 3, for the month of March, 1897.)

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfalls with special reference to their effect on crops for the weeks ending April 5, 12, 19, 26, 1897.

Daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., April 30, 1897.

CONGRESSIONAL REPRINTS.

(For sale by Superintendent of Documents, Union Building, Washington, D. C.)

The Cotton Plant. Pp. 433, pls. 4, figs. 32. (Bulletin No. 33, Office of Experiment Stations.) Reprint. Price, bound in cloth, 60 cents.

This publication was prepared by experts in the Department, with the collaboration of various specialists and a practical planter, not connected with the Department. The volume contains chapters on: History and general statistics of cotton; botany of cotton; chemistry of cotton; climatology and soils; manuring cotton, cultivated varieties of cotton; culture of cotton; diseases of cotton; insects which affect the cotton plant in the United States; handling and uses of cotton; feeding value of cotton-seed products; and a supplemental bibliography of cotton.

Special Report on the Diseases of the Horse: Prepared under the direction of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, by Drs. Michener, Law, Harbaugh, Trumbower, Liantard, Holcombe, Huidekoper, and Dickson. Pp. 560, pls. 44. Reprint. Price 65 cents.

Special Report on Diseases of Cattle and on Cattle Feeding. Prepared under the direction of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, by Drs. Murray, Atkinson, Harbaugh, Lowe, Law, Dickson, Trumbower, Smith, and Professor Henry. Pp. 496, pls. 44. Reprint. Price 65 cents.

ANNOUNCEMENT.

The Superintendent of Documents has a limited supply of the following publications, the editions of which were for a time announced as exhausted:

Yearbook of the Department of Agriculture for 1894. Pp. 608. Pls. 7, figs. 140. Price 50 cents.

Yearbook of the Department of Agriculture, 1895. Pp. 656, pls. 10, figs. 134. Price 55 cents.

The Principal Household Insects of the United States, by L. O. Howard and C. L. Marlatt, with a chapter on Insects Affecting Dry Vegetable Foods. By F. H. Chittenden. Pp. 130, figs. 64. (Bulletin No. 4, new series, Division of Entomology.) Price 10 cents.

Insects Affecting Domestic Animals: An Account of the Species of Importance in North America, with Mention of Related Forms Occurring on Other Animals. By Herbert Osborn, Professor of Zoology and Entomology, Iowa Agricultural College, Ames, Iowa. Pp. 302, pls. 5, figs. 170. (Bulletin No. 5, new series, Division of Entomology.) Price 20 cents.

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Washington, D. C., May 31, 1897.

MONTHLY LIST OF PUBLICATIONS.

[May, 1897.]

(See accompanying notes regarding Department publications.)

American Grasses (illustrated). By F. Lamson-Scribner, Agrostologist. Pp. 331, figs. 302. (Bulletin No. 7, Division of Agrostology.) Price 30 cents.

Illustrations, brief descriptions, and notes upon the distribution of each of a number of native and introduced grasses, selected from cuts originally designed to illustrate a Handbook of North American Grasses.

Studies on American Grasses.—I. New or Little Known Grasses. By F. Lamson-Scribner. II. Leaf Structure of *Jouvea* and of *Eragrostis obtusiflora*. By Miss E. L. Ogden. Pp. 23, pls. ix, fig. 1. (Bulletin No. 8, Division of Agrostology—Grass and Forage Plant Investigations.) Price 10 cents.

In this bulletin, the second of the series, are included descriptions and illustrations of a number of new or little known species of grasses, including two from Mexico; a study of the histological characters presented by the leaves of *Jouvea pilosa* and *Jouvea straminea*, and of *Eragrostis*.

Dietary Studies with Reference to the Food of the Negro in Alabama in 1895 and 1896. Conducted with the cooperation of the Tuskegee Normal and Industrial Institute, and the Agricultural and Mechanical College of Alabama. Reported by W. O. Atwater and Chas. D. Woods. Pp. 69, pls. ii. (Bulletin No. 38, Office of Experiment Stations.) Price 5 cents.

Results of an inquiry into the food of the colored population of the Southern States, especially as regards the kinds, amounts, and composition of the food materials used. It embraces also a consideration of the hygienic and pecuniary economy of their diet, its deficiencies, the ways in which it might be improved, and the steps which should be taken to bring about an improvement.

Cotton Culture in Egypt. By George P. Foaden, B. S., Professor of Agriculture, Tewfikieh College of Agriculture, Ghizeh, Egypt. Pp. 34, fig. 1. (Bulletin No. 42, Office of Experiment Stations.) Price 5 cents.

Prepared for the information of cotton planters in this country. The interest of the subject to American growers and manufacturers of cotton is made apparent by the addition to Professor Foaden's article of a review by Mr. F. H. Hitchcock, Chief of the Section of Foreign Markets of this Department, on the growing importance of Egypt as a cotton exporting country.

Some Common Birds in their Relation to Agriculture. By F. E. L. Beal, B. S., Assistant Ornithologist, Biological Survey. Pp. 40, figs. 22. (Farmers' Bulletin No. 54, Division of Biological Survey.)

A brief account of some results of the investigation conducted by the Biological Survey regarding the food habits of birds, embracing the conclusions reached for about thirty species, including the cuckoos; the woodpeckers; the kingbird; the phoebe; the bluejay; the crow; the bobolink, or rice bird; the red-winged blackbird; the meadow lark, or old field lark; the Baltimore oriole; the crow blackbird, or grackle; the sparrows; the rose-breasted grosbeak; the swallows; the cedarbird; the catbird; the brown thrasher; the house wren; the robin; the bluebird.

The Dairy Herd: Its Formation and Management. By Henry E. Alvord, C. E., Chief of Dairy Division, Bureau of Animal Industry. [Reprinted, with revision by the author, from Yearbook of the U. S. Department of Agriculture for 1894.] Pp. 24. (Farmers' Bulletin No. 55, Bureau of Animal Industry.)

CONTENTS: Cattle for the dairy—Special adaptation—Formation of the dairy herd—Pure-bred dairy cattle and grades—The bull and his treatment—Individuality and culling the herd by its record—Accommodations for the herd—Health of the herd—Fall-fresh cows most profitable—Drying off cows and calving time—Abortion and milk fever—Care of calves and young stock—Attendance and milking—The pasture season and soiling—The stabling season—Feeding the herd.

Organization Lists of the Agricultural Experiment Stations and Institutions with Courses in Agriculture in the United States. Pp. 96. (Bulletin No. 39, Office of Experiment Stations.) Price 5 cents.

Statistics in regard to the Agricultural Experiment Stations and Colleges in the United States.

Crop Report for May, 1897. Pp. 4. (Circular No. 148, new series, Division of Statistics.)

CONTENTS: Condition of winter grain—Wheat, barley, and rye—Meadows and pastures—Spring plowing—Cotton—Special inquiries—Report of European agent: Great Britain, France, Germany, Sweden, Spain, Italy, Austria, Hungary, Russia, and India.

Three New Weeds of the Mustard Family. By Lyster H. Dewey, Assistant in Division of Botany. Pp. 6, figs. 3. (Circular No. 10, Division of Botany.)

Comprises descriptions of Gray Berteroa, Hare's-ear Mustard, and Ball Mustard, three plants belonging to the Mustard family, that have been reported from several new localities in the northern United States and Canada during the past four years.

The Periodical Cicada in 1897. By E. A. Schwartz, Assistant, Division of Entomology. Pp. 4. (Circular No. 22, second series, Division of Entomology.)

The object of this circular, which gives the recorded and expected appearances of these locusts, is to invite information regarding the appearance of the cicada the present year so that previous records may be confirmed, the doubtful ones among them either verified or rejected, and new localities made known.

The Buffalo Tree-Hopper. By C. L. Marlatt, First Assistant Entomologist. Pp. 4, figs. 2. (Circular No. 23, second series, Division of Entomology.)

CONTENTS: General appearance and nature of injury—Habits and life history—Food plants—Remedies and preventives.

Twelfth and Thirteenth Annual Reports of the Bureau of Animal Industry for Fiscal Years 1895-96. Pp. 362, pls. xxxviii, figs. 4. (Printed by authority of Congress.) Of this report there are printed under the act of January 12, 1895, "thirty thousand copies, of which seven thousand shall be for the Senate, fourteen thousand for the House, and nine thousand for distribution by the Agricultural Department."

CONTENTS: Transactions of the Bureau for the fiscal year ended June 30, 1895—Transactions of the Bureau for the fiscal year ended June 30, 1896—Contagious diseases of animals in Great Britain: Swine fever, pleuro-pneumonia, tuberculosis, foot-and-mouth disease, anthrax—Live-stock shipments from Canada, Argentina, and Australia to England—Texas fever in Australia—The curing of meats—Dipping cattle for the destruction of ticks—Investigations of diseases of domesticated animals—Infectious leukaemia in fowls: A bacterial disease frequently mistaken for fowl cholera—Tuberculosis in swine: The nature of the disease, with a report of three cases—Outbreak of a nonspecific disease among swine—Leeches: A histological investigation of two cases of an equine mycosis, with a historical account of a supposed similar disease called bursattee, occurring in India—Preliminary investigations concerning the number and nature of bacteria in freshly drawn milk—A report on rabies in Washington, D. C.—The detection of tuberculosis in cattle—Creameries or butter factories; advantages, location, organization, and equipment—Miscellaneous reports of inspectors and correspondents—Laws of States and Territories for the control of contagious animal diseases.

Exports of Cotton from Egypt. By Frank H. Hitchcock, Chief of Section of Foreign Markets. Pp. 7. (Circular No. 15, Section of Foreign Markets.)

Shows the quantity, value, and average export price of cotton exported from Egypt in the years 1874 to 1895, inclusive, and the quantity and value of cotton imported into the United States from principal sources of supply during the fiscal years 1875 to 1896, inclusive.

List of Officials and Associations Connected with the Dairy Interests in the United States and Canada for 1897. Pp. 8. (Circular No. 18, Bureau of Animal Industry.)

The Forces which Operate to Destroy Roads, with Notes on Road Stones and Problems Therewith Connected. By C. L. Whittle. Pp. 14, pls. 4. (Circular No. 29, Office of Road Inquiry.)

CONTENTS: Physical agencies—Dynamical agencies—Chemical agencies—Essential qualities of road stones—Relation of decomposition to cementation—The effect of moisture on a roadway.

Monthly Weather Review. March, 1897. Vol. XXV, No. 3. Pp. 85-121, charts 6. Price 10 cents.

Charts of the Weather Bureau—

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall with special reference to their effect on crops. Nos. 8, 9, 10, 11, 12, for the weeks ending May 3, 10, 17, 24, and 31, 1897.

Daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

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United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., June 30, 1897.

MONTHLY LIST OF PUBLICATIONS.

[June, 1897.]

(See accompanying notes regarding Department publications.)

Daily River Stages at River Gauge Stations on the Principal Rivers of the United States. Part V, for the years 1893, 1894, and 1895. Prepared under the direction of Willis L. Moore, Chief of Bureau, by Park Morrill, Forecast Official. Pp. i-lxii, 1-555. (Weather Bureau, No. 112.) Quarto. (For office use only.)

Experiment Station Record, Vol. VIII, No. 8. Pp. i-v, 639-738. Price 10 cents.

Experiment Station Record, Vol. VIII, No. 9. Pp. i-vii, 739-838. Price 10 cents.

The Record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations.

NOTE.—For the convenience of those who desire to receive this publication regularly the Superintendent of Documents has decided to fix the price per volume (12 numbers), beginning with Vol. VIII, at \$1, payable in advance.

An Electrical Method of Determining the Moisture Content of Arable Soils. By Milton Whitney, Frank D. Gardner, and Lyman J. Briggs. Pp. 26, figs. 6. (Bulletin No. 6, Division of Soils.) Price 5 cents.

CONTENTS: Solubility of soils—The nature and electrical properties of solutions—The bridge box for measuring soil resistances—Temperature compensating cells—Soil electrodes—Connections and use of bridge box in field work—Table of reciprocals for calculating the conductivity of soils.

An Electrical Method of Determining the Temperature of Soils. By Milton Whitney and Lyman J. Briggs. Pp. 15, fig. 1. (Bulletin No. 7, Division of Soils.) Price 5 cents.

CONTENTS: The temperature—Resistance coefficient of soils—Glass temperature cells—Measuring the electrical resistance of temperature cells—Burying the temperature cells in the soil.

An Electrical Method of Determining the Soluble Salt Content of Soils, with Some Results of Investigations on the Effect of Water and Soluble Salts on the Electrical Resistance of Soils. By Milton Whitney and Thos. H. Means. Pp. 30, figs. 6. (Bulletin No. 8, Division of Soils.) Price 5 cents.

CONTENTS: A method of determining the soluble salt content of soils—Soluble salt content of several soils—The influence of water and of soluble salts on the electrical resistance of soils—Resistance of salt solution absorbed in pure quartz sand—Influence of the texture of soils upon the electrical resistance—Reduction of electrical resistances to a uniform temperature.

Contributions from The U. S. National Herbarium, Vol. V, No. 2. Notes on the Plants used by the Klamath Indians of Oregon. By Frederick V. Coville. (Issued June 9, 1897.) Pp. i-v, 87-108, I-II. (Division of Botany.) Price 5 cents.

The Water Hyacinth, and Its Relation to Navigation in Florida. By Herbert J. Webber. Pp. 20, pl. 1, figs. 4. (Bulletin No. 18, Division of Botany.) Price 5 cents.

A report on (1) Historical notes regarding the plant, including its habitat, manner of growth, propagation, and anatomical and physiological characters; (2) its introduction and spread in Florida; (3) the present distribution of the plant in the State, and its effect on navigation and commerce; and (4) possibilities of exterminating it.

Sooty Mold of the Orange and its Treatment. By Herbert J. Webber, Assistant, Division of Vegetable Physiology and Pathology. (Issued June 17, 1897.) Pp. 44, pls. 5. (Bulletin No. 13, Division of Vegetable Physiology and Pathology.) Price 10 cents.

CONTENTS: Description and nature of sooty mold—Its distribution—Plants on which it occurs in Florida—Effects on the orange tree and fruit—Methods of preparing for market fruits affected with sooty mold—Orange insects which it follows—Methods of treatment.

Experiment Station Work—I. Prepared in the Office of Experiment Station. Pp. 31, figs. 10. (Farmers' Bulletin No. 56.)

This is the first number of a subseries of brief, popular bulletins summarizing the work of the agricultural experiment stations.

CONTENTS: Good vs. poor cows—Corn vs. wheat—Much vs. little protein—Forage crops for pigs—Robertson silage mixture—Alfalfa—Proportion of grain to straw—Phosphates as fertilizers—Harmful effects of muriate of potash—Studies in irrigation—Potato scab—Barnyard manure.

Butter Making on the Farm. By C. P. Goodrich, Dairy Instructor, Farmers' Institute Department, University of Wisconsin, under the supervision of the Dairy Division, Bureau of Animal Industry. Pp. 15. (Farmers' Bulletin No. 57.)

CONTENTS: Good milk—Creaming the milk—Deep cold-setting—The farm separator—Ripening cream—The churn—Churning—White specks in butter—Coloring butter—Salting and working butter—Shall butter be worked once or twice?—Make butter to suit the customer.

Protest Against Proposed Legislation [anti-vivisection] Restricting the Experiments of the Department of Agriculture. A letter from the Secretary to U. S. Senator Proctor. Pp. 8. (Miscellaneous Circular, Office of the Secretary.)

Our Trade with Cuba from 1887 to 1897. By Frank H. Hitchcock, Chief of the Section of Foreign Markets. Pp. 30. (Circular No. 16, Section of Foreign Markets.)

Crop Report for June, 1897. By Henry A. Robinson, Statistician. Pp. 4. (Report No. 149, new series, Division of Statistics.)

CONTENTS: Crop conditions—Foreign agriculture—Average condition of growing crops.

Factory Cheese and How it is Made. By G. Merry, of Verona, N. Y. Pp. 8. (Circular No. 19, Bureau of Animal Industry.) Reprinted from Bulletin No. 15, Bureau of Animal Industry.

Accessions to the Department Library. January–March, 1897. Pp. 15. (Library Bulletin No. 15.)

References to the Literature of the Sugar Beet, Exclusive of Works in Foreign Languages. Compiled by Claribel R. Barnett. Pp. 9. Quarto. (Library Bulletin No. 16.)

The Vitality of Seed Treated with Carbon Bisulphid. By Gilbert H. Hicks, First Assistant Botanist, and John C. Dabney, Assistant, Division of Botany. Pp. 5. (Circular No. 11, Division of Botany.)

CONTENTS: Introduction—Commercial method of treating seed with carbon bisulphid—Experiments in a saturated atmosphere of carbon bisulphid—Experiments on grain in bulk—Conclusions.

Constitution of the Association of American Agricultural Colleges and Experiment Stations. Pp. 4. (Circular No. 36, Office of Experiment Stations.)

Instructions for Volunteer Observers. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau. Pp. 23, figs. 10. (Weather Bureau.)

Monthly Weather Review. April, 1897. Vol. XXV, No. 4. Pp. 123–188, charts 6. Price 10 cents.

Charts of the Weather Bureau—

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall with special reference to their effect on crops. Nos. 13, 14, 15, 16, for the weeks ending June 7, 14, 21, and 28, 1897.

Description of cloud forms, second edition. This chart has been prepared with a view of aiding observers in the identification of the several cloud forms according to the International System of Classification. 10 figs.

River System and Flood Service of the United States. Size, 46 by 52 inches.

Daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

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United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., July 31, 1897.

MONTHLY LIST OF PUBLICATIONS.

[July, 1897.]

(See accompanying notes regarding Department publications.)

The Yearbook of the Department of Agriculture, 1896. Pp. 686, pls. 6, figs. 164. Price 50 cents.

CONTENTS: Report of the Secretary of Agriculture—Extermination of noxious animals by bounties—The use of steam apparatus for spraying—Influence of environment in the origination of plant varieties—Potash and its function in agriculture—Some common poisonous plants—Timothy in the prairie region—The country slaughterhouse as a factor in the spread of disease—Irrigation on the Great Plains—The blue jay and its food—Seed production and seed saving—Insect control in California—Diseases of shade and ornamental trees—Some modern disinfectants—Migration of weeds—Cowpeas (*Vigna catjang*)—The improvement of our native fruits—The superior value of large, heavy seed—Tree planting in waste places on the farm—The asparagus beetles—The feeding value of corn stover—Agricultural education and research in Belgium—Olive culture in the United States—The uses of wood—Ambrosia beetles—Care of dairy utensils—Some standard varieties of chickens—Methods of propagating the orange and other citrus fruits—Improvements in wheat culture—Pruning and training of grapes—An ideal department of agriculture and industries—Appendix.

NOTE.—The Yearbook contains (1) a general report of the operations of the Department; (2) a series of papers prepared in the different bureaus and divisions of the Department, or by experts specially engaged, and designed to present in popular form results of investigations in agricultural science or new developments in farm practice; (3) an appendix of 104 pages containing miscellaneous information and agricultural statistics compiled down to the latest available date, relative to the production, values, per capita consumption, exportation and importation of farm products; (4) an index of 28 pages. Of the large edition of 500,000 copies, 110,000 copies are allotted to the Senators and 360,000 to the Members of the House of Representatives—or over 1,000 copies for each member of the two Houses of Congress—the comparatively small remainder being turned over to the Department of Agriculture for its exchanges and correspondents.

The Two-Lined Chestnut Borer (*Agilus bilineatus* Weber). By F. H. Chittenden, Assistant Entomologist. Pp. 8, fig. 1. (Circular No. 24, second series, Division of Entomology.)

CONTENTS: Recent damage to forest growth—Probability of future destruction of trees—Reported injury to chestnut trees—Predisposing causes of injury—Description of the insect—Distribution; time of appearance—Nature of damage and manner of work—Other borers in chestnut—Parasitic enemies—Preventive and remedial measures.

The San Jose Scale and Its Nearest Allies. A brief consideration of the characters which distinguish these closely related injurious scale insects. Prepared under the direction of the Entomologist, by T. D. A. Cockerell, Entomologist of the New Mexico Agricultural Experiment Station, Las Cruces, N. Mex. Pp. 31, figs. 15. (Bulletin No. 6, technical series, Division of Entomology.) Price 5 cents.

CONTENTS: The preliminary examination—The study of the scale—The microscopic characteristics of the adult females—The subgenera and sections of *Aspidiotus*—The relationships of the San Jose scale—Habits of the species—Annotated list of the species of *Aspidiotus*—Postscript.

The Ox Warble (*Hypoderma lineata* Villers). By C. L. Marlatt, First Assistant Entomologist. Pp. 12, figs. 10. (Circular No. 25, second series, Division of Entomology.)

CONTENTS: General characteristics and origin—Amount and nature of damage—Life history and habits—Preventives and remedies.

Crop Report for July, 1897. By John Hyde, Acting Statistician. Pp. 8. (Report No. 150, new series, Division of Statistics.)

CONTENTS: Crop conditions—Average condition of growing crops—Foreign agriculture.

United States Wheat for Eastern Asia. By Frank H. Hitchcock, Chief of the Section of Foreign Markets. Pp. 8. (Circular No. 17, Section of Foreign Markets.)

Hawaiian Commerce from 1887 to 1897. By Frank H. Hitchcock, Chief of the Section of Foreign Markets. Pp. 37. (Circular No. 18, Section of Foreign Markets.)

Experiment Station Record, Vol. VIII, No. 10. Pp. i-v, 839-938. Price 10 cents.

The Record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations.

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Proceedings of the Tenth Annual Convention of the Association of American Agricultural Colleges and Experiment Stations, held at Washington, D. C., November 10-12, 1896. Edited by A. C. True, for the Office of Experiment Stations, and H. H. Goodell, for the Executive Committee of the Association. Pp. 120. (Bulletin No. 41, Office of Experiment Stations.) Price 10 cents.

Statistics of Land-Grant Colleges and Agricultural Experiment Stations, 1896. By A. C. True, Director of the Office of Experiment Stations. Pp. 18. (Circular No. 35, Office of Experiment Stations.)

Second Report of the Committee on Methods of Teaching Agriculture. By J. H. Connell, A. C. True, T. F. Hunt, H. T. French, and H. H. Wing, Committee. Pp. 4. (Circular No. 37, Office of Experiment Stations.)

A report made by the committee named to the Association of American Agricultural Colleges and Experiment Stations at the convention held in Minneapolis, Minn., July 13-15, 1897.

The Dairy Industry in Missouri and Kansas. By Levi Chubbuck, Special Expert Agent, Dairy Division, under the direction of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry. Pp. 23, maps 2. (Bulletin No. 18, Bureau of Animal Industry.) Price 5 cents.

CONTENTS: Introduction—Present state of the dairy industry in Missouri and Kansas—Topography—Method of feeding—Pasture—Pasturing harvested corn-fields—Feeding corn fodder—Feeding wheat straw—Water supply—Classification of dairies—Appendix.

Preventive Vaccination Against Blackleg. By D. E. Salmon, Chief of Bureau of Animal Industry. Pp. 2. (Circular No. 20, Bureau of Animal Industry.)

Needed Reforms in Fertilizer Inspection. Report of the Committee Appointed at the Preliminary Meeting of Official Inspectors on Fertilizers, held in New Haven, Conn., March 9, 1897, presented by request of the Committee by H. W. Wiley. Pp. 3. (Circular No. 3, Division of Chemistry.)

A Monograph on the Mechanics and Equilibrium of Kites. By C. F. Marvin, Professor of Meteorology. Pp. 71, figs. 23. (Weather Bureau, No. 122.) Price 10 cents.

CONTENTS: Introduction—Definitions and axiomatic statements—General statements—Forces acting on kites in general—Circumstances of equilibrium and motion—Explanation of the flight of kites—Abnormal flight of kites—Effects of changes in wind and position of kite—Conditions of stability and steadiness of kites—Numerical data—The mechanics of the kite string—Properties of the catenary.

Monthly Weather Review. May, 1897. Vol. XXV, No. 5. Pp. 189–234, charts 5. Price 10 cents.

Monthly List of Publications. July, 1897. Pp. 4. (No. 239, Division of Publications.)

A list of the publications issued during the current month by the United States Department of Agriculture.

Charts of the Weather Bureau—

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall with special reference to their effect on crops. Nos. 17, 18, 19, 20, for the weeks ending July 5, 12, 19, and 26, 1897.

Description of cloud forms, third edition. This chart has been prepared with a view of aiding observers in the identification of the several cloud forms according to the International System of Classification. 10 figs.

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United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., August 31, 1897.

MONTHLY LIST OF PUBLICATIONS.

[August, 1897.]

(See accompanying notes regarding Department publications.)

An Experiment in Tea Culture. A report on the tea gardens of Dr. Charles U. Shepard, Pinehurst, S. C. By William Saunders, Horticulturist, U. S. Department of Agriculture. Pp. 10. (Circular No. 1, Division of Gardens and Grounds.)

A report based upon the observations of the author on the occasion of a recent personal visit to Pinehurst, made by direction of the Secretary.

CONTENTS: Introductory—Pinehurst gardens—Question of moisture—The question of labor—Seed and raising plants—Systems of pruning—Need of students of tea culture—Pinehurst garden park—Conclusion.

The Camphor Tree. By Lyster H. Dewey, Assistant in Division of Botany. Pp. 7, figs. 2. (Circular No. 12, Division of Botany.)

CONTENTS: Description—Native range—Range under cultivation—Uses of the tree and its products—Conditions of successful cultivation—Propagation—Planting and cultivation—Distillation of camphor in Japan—Suggested improvements—Outlook for future market.

Crop Report for August, 1897. By John Hyde, Statistician. Pp. 7. (New series, Report No. 151, Division of Statistics.)

CONTENTS: Crop conditions—Average condition of growing crops—Foreign agriculture.

The Grain Smuts: Their Cause and Prevention. By Walter T. Swingle, Assistant, Division of Vegetable Physiology and Pathology. Pp. i-iii, 409-420. (Reprinted from the Yearbook for 1894.)

Defines the stinking smuts of wheat, loose smuts of wheat and oats, and smuts of barley, rye, and corn, and gives directions for their prevention and treatment; it embraces also a consideration of the increase in yield as the result of seed treatment. (Reannounced because the pamphlet is again available and the information timely.)

A Descriptive Catalogue of the Useful Fiber Plants of the World. By Chas. Richards Dodge, Special Agent. Pp. 361, Pls. XIII, figs. 103. (Report No. 9, Office of Fiber Investigations.) Price 30 cents.

A catalogue of 1,018 species of useful fiber plants, the more important of which are fully described and treated from the botanical, agricultural, and industrial standpoints, being described or referred to under their scientific, commercial, common, and native names; and the kinds of fiber produced, the part of the plant producing it, and the position of the species in the vegetable kingdom being indicated.

CONTENTS: Definition of fibers—The ancient uses of fibers—Principal fibers used commercially in the United States, and their imports—Economic investigations—Chemical investigations—Micro-chemical study of fibers—The classification of fibers, based on uses and structure—Descriptive catalogue of world's fibers—Authorities and contributors—Appendix.

Contributions from The U. S. National Herbarium, Vol. V, No. 3. Studies of Mexican and Central American Plants. By J. N. Rose. Pp. i-vii, 109-144, i, Pls. II-XVII, figs. 1-6. Issued August 27, 1897. Price 10 cents.

CONTENTS: Studies of Mexican and Central American Plants—Prefatory note—Notes on Celastraceæ—Notes on Rutaceæ—Notes on Burseraceæ—Notes on Cucurbitaceæ—A synopsis of the species of *Heliocarpus*—A synopsis of the species of *Wimmeria*—A synopsis of the American species of *Hermannia*—A synopsis of *Drymaria nodosa* and its allies—Descriptions of miscellaneous new species.

Experiment Station Record, Vol. VIII, No. 11. Pp. i-vi, 939-1036. Price 10 cents.

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Accessions to the Department Library. April-June, 1897. Pp. 26. (Library Bulletin No. 17.)

The Standard System of Coordinate Axes for Magnetic and Meteorological Observations and Computations. Prepared under the direction of Willis L. Moore, Chief of Bureau, by Frank H. Bigelow, Professor of Meteorology. Pp. 7. (Weather Bureau Bulletin No 124.)

Reprinted from Monthly Weather Review for May, 1897.

Wind Barometer Table. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau, by E. B. Garriott, Professor of Meteorology. Pp. 5. (Weather Bureau Bulletin No. 125.)

Reprinted from the Monthly Weather Review for May, 1897.

Clothing and Temperature. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau, by W. F. R. Phillips, M. D., in charge of the Section of Climatology. Pp. 5. (Weather Bureau Bulletin No. 126.)

Reprinted from Monthly Weather Review for May, 1897.

A brief statement of the results of a series of observations of the temperature of certain parts of the clothing and of the body, undertaken to acquire some idea of the influence of general meteorological conditions upon personal comfort and upon the efficiency of clothing in different conditions of the weather.

Charts of the Weather Bureau—

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall with special reference to their effect on crops. Nos. 21, 22, 23, 24, 25, for the weeks ending August 2, 9, 16, 23, 30, 1897.

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For publications mentioned in the Monthly List preceding, **to which a price is attached** (with the exception of those issued by the Weather Bureau), application must be made to the

SUPERINTENDENT OF DOCUMENTS,

UNION BUILDING,

WASHINGTON, D. C.,

accompanied by the price thereof as fixed by him in accordance with the provisions of sections 61 and 67 of the act providing for the public printing and binding, and the distribution of public documents, approved January 12, 1895, and all remittances should be made to him and **not** to the Department of Agriculture; such remittances should be made by postal money order and not by private check.

The Superintendent of Documents is not permitted to sell more than one copy of any public document to the same person.

The Superintendent of Documents is not an official of the Department of Agriculture.

Applications for all other publications of this Department should be addressed to the Secretary of Agriculture, Washington, D. C.

Do not inclose stamps when writing to the Department about publications; it is not necessary in order to secure a reply.

Please advise the Department of any change of address.

The Department has no copies of the Horse Book or the Cattle Book.

The Superintendent of Documents has copies of the Yearbook for sale, as follows: Yearbook 1894, 50 cents; Yearbook 1895, 55 cents; Yearbook 1896, 50 cents.

United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., September 30, 1897.

MONTHLY LIST OF PUBLICATIONS.

[September, 1897.]

(See accompanying notes regarding Department publications.)

* Synoptical Index of the Reports of the Statistician, 1863-1894. By Geo. F. Thompson, Assistant in Charge of Document Section, Division of Publications, under the Direction of Geo. Wm. Hill, Chief of Division of Publications. Pp. 258. (Bulletin No. 2, Division of Publications.) Price 20 cents.

A work designed to render available the information contained in the various reports of the Division of Statistics. The system adopted is to use as an index word one that suggests the subject of the article; in most instances this is done by using the principal words of the caption. Following the index word is the title of the article, with the proper reference, and also a synopsis of the article if it appears that one is necessary. There will be found in the synopsis of some articles information not suggested in the title; this is a defect in giving the article a title, and one which could not always be remedied in the index, although whenever practicable a distinctive index word is used.

Crop Report for September, 1897. By John Hyde, Statistician. Pp. 4. (New series, Report No. 152, Division of Statistics.)

CONTENTS: Crop conditions—Average condition of growing crops—The wheat situation—Tabular statement showing by States average condition of crops September 1, 1897.

The Camphor Tree. By Lyster H. Dewey, Assistant in Division of Botany. Pp. 7, figs. 2. (Circular No. 12—Revised, Division of Botany.)

CONTENTS: Description—Native range—Range under cultivation—Uses of the tree and its products—Conditions of successful cultivation—Propagation—Planting and cultivation—Distillation of camphor gum—Suggested improvements—Refining—Outlook for future market.

Experiment Station Record, Vol. IX, No. 1. Pp. I-IV, 1-100. Price 10 cents.

The Record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experimental stations.

NOTE.—For the convenience of those who desire to receive this publication regularly the Superintendent of Documents has decided to fix the price per volume (12 numbers), beginning with Vol. VIII, at \$1, payable in advance.

* This publication is one of those the edition of which is expressly limited under section 89 of the act of January 12, 1895.

The Soy Bean as a Forage Crop. By Thomas A. Williams, Assistant Agrostologist, under the direction of F. Lamson-Scribner, Agrostologist. With an Appendix on Soy Beans as Food for Man, by C. F. Langworthy, Ph. D., Office of Experiment Stations. Pp. 24, figs. 5. (Farmers' Bulletin No. 58.)

CONTENTS: General characteristics and origin—Varieties—Conditions of growth—Methods of culture—Harvesting—Yield—Chemical composition—Digestibility—Value and uses—Summary—Appendix: Soy beans as food for man.

Insects Affecting Domestic Animals: An Account of the Species of Importance in North America, with Mention of Related Forms Occurring on Other Animals. Prepared under the direction of the Entomologist. By Herbert Osborn, Professor of Zoology and Entomology, Iowa Agricultural College. Pp. 302, pls. 5, figs. 170. (Bulletin No. 5, new series, Division of Entomology.) Reprint. Price 20 cents.

A discussion of those insects which by direct attack upon domesticated animals render themselves an injurious element to the stock-breeder, poultry-raiser, and keeper of various animals for pleasure or profit. The nine chapters of this bulletin are headed as follows: Introduction; Diptera (mosquitoes, gnats, flies, and ticks); Siphonaptera (fleas); Hemiptera (bugs and lice); Suborder Mallophaga (bird lice); Arachnida; Remedies—preventive treatment; List of parasites according to hosts; Literature.

Bee Keeping. By Frank Benton, M. S., Assistant Entomologist. Pp. 32, figs. 19. (Farmers' Bulletin No. 59.)

CONTENTS: Locations suited to the keeping of bees—The returns to be expected from an apiary—Any one who desires to do so can learn to manipulate bees—How to avoid stings—What hive to adopt—Management in swarming—Special crops for honey alone not profitable—How to obtain surplus honey and wax—The wintering of bees—The risk of loss through disease and enemies.

Methods of Curing Tobacco. By Milton Whitney, Chief of Division of Soils. Pp. 16. (Farmers' Bulletin No. 60.)

CONTENTS: Introduction—Curing the Northern cigar tobacco—Curing tobacco in Florida—Curing White Burley tobacco—Curing bright yellow tobacco—Curing export tobacco—Marketing tobacco—Types of tobacco.

Soil Moisture: A Record of the Amount of Water Contained in Soils during the Crop Season of 1896. By Milton Whitney and Ralph S. Hosmer. Pp. 23, diagrams 12. (Bulletin No. 9, Division of Soils.) Price 5 cents.

CONTENTS: Introduction—Method of making moisture determinations—Calculation of results—Conditions influencing the relation of soils to water—Soil conditions during the season of 1896 at nine different stations—Moisture content of soils—Tabular statement of daily determinations.

Proceedings of the National Convention for the Suppression of Insect Pests and Plant Diseases by Legislation, held at Washington, D. C., March 5 and 6, 1897. Edited by B. T. Galloway. Pp. 31. (Miscel. Bulletin, U. S. Department of Agriculture.) Price 5 cents.

Age of Trees and Time of Blazing Determined by Annual Rings. By B. E. Fernow, Chief of Division of Forestry. Pp. 11, figs. 12. (Circular No. 16, Division of Forestry.)

CONTENTS: The annual ring—Covering of blazes, wounds, and knots.

The Pear Slug (*Eriocampoides limacina* Retzius), by C. L. Marlatt, First Assistant Entomologist. Pp. 7, figs. 4. (Circular No. 26, second series, Division of Entomology.)

CONTENTS: Characteristics and history—Life history and habits—Natural enemies—Remedies and preventives.

The Bermuda Lily Disease: A Preliminary Report of Investigations. By Albert F. Woods, Assistant Chief, Division of Vegetable Physiology and Pathology. Pp. 15, figs. 4. (Bulletin No. 14, Division of Vegetable Physiology and Pathology.) Price 5 cents.

This study of the disease affecting the Easter lily was begun about two years ago, and while in no sense completed, yet sufficient has been accomplished to warrant the publication of a preliminary report.

CONTENTS: Characteristics of the lily disease—Prevalence of the disease and its destructiveness in this country—Theories as to the cause of the disease—Evidences as to the causes influencing the lily disease—Preventive measures—Summary.

Monthly Weather Review. June, 1897. Vol. XXV, No. 6. Pp. 235–283, charts 5. Price 10 cents.

Monthly Weather Review. July, 1897. Vol. XXV, No. 7. Pp. 285–338, charts 5. Price 10 cents.

Charts of the Weather Bureau—

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall with special reference to their effect on crops. Nos. 26, 27, 28, 29, for the weeks ending September 6, 13, 20, 27, 1897.

Meteorological Chart of the Great Lakes, giving data for October. Size 20 by 25 inches.

Daily Weather Map showing weather conditions throughout the United States and giving forecasts of probable changes.

Monthly List of Publications. August, 1897. Pp. 4. (No. 241, Division of Publications.)

A list of the publications issued during the current month by the United States Department of Agriculture.

NOTES REGARDING DEPARTMENT PUBLICATIONS.

The publications of the United States Department of Agriculture are of three classes: (1) Serial publications; (2) scientific and technical reports; and, (3) popular bulletins.

The first two classes are issued in limited editions and are not intended for general distribution, being particularly designed for scientific students and for libraries and institutions of learning. They are distributed free to persons cooperating with or rendering the Department some service. Sample copies will be sent if requested, but miscellaneous applicants should apply to the Superintendent of Documents, Union Building, Washington, D. C., to whom all publications not needed for official use, except circulars and bulletins printed by law for free distribution, are turned over in accordance with the following provision of the act providing for the public printing and binding and the distribution of public documents, viz:

SEC. 67. All documents at present remaining in charge of the several Executive Departments, bureaus, and offices of the Government not required for official use shall be delivered to the Superintendent of Documents, and hereafter all public documents accumulating in said Departments, bureaus, and offices not needed for official use shall be annually turned over to the Superintendent of Documents for distribution or sale.

The Farmers' Bulletins treat in a practical manner of subjects of particular interest to farmers, and are issued with a view to the widest possible circulation. These bulletins and circulars of information are free, two-thirds of them being set aside under the law for distribution through Senators, Representatives, and Delegates in Congress. Applications may be addressed to the Secretary of Agriculture, stating both the **number** and **title** of the publication desired.

The Department has no list to whom all publications are sent; the variety of the subjects treated naturally restricts the distribution of most of them to the sections of country to which they are especially suitable and to specialists. The Monthly List of Publications, issued the first of each month, will be mailed to all who apply for it. In it the titles of the publications are given with a note explanatory of the character of each, thus enabling the reader to make intelligent application for such bulletins and reports as are certain to be of interest to him.

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United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., October 30, 1897.

MONTHLY LIST OF PUBLICATIONS.

[October, 1897.]

(See accompanying notes regarding Department publications.)

Proceedings of the Ninth Annual Meeting of the Association of Economic Entomologists. Pp. 87, figs. 2. (Bulletin No. 9, new series, Division of Entomology.) Price 10 cents.

CONTENTS: The Present and Future of Applied Entomology in America—Additional Observations on the Parasites of *Orgyia leucostigma*—Temperature Experiments as Affecting Received Ideas on the Hibernation of Injurious Insects—Notes on Certain Species of Coleoptera that Attack Useful Plants—An Experience with Paris Green—The Present Status of the San Jose Scale in Michigan—Vernacular Names of Insects—Notes on Cape of Good Hope Insects—A Useful American Scale Insect—Insects of the Year in Ohio—On the Preparation and Use of Arsenate of Lead—Notes on the Malodorous Carabid, *Nomius pygmaeus* Dej.—Notes on Insecticides—The Bean Leaf-beetle (*Cerotoma trifurcata* Forst.)—Notes on *Anarsia lineatella* Zell.—A Successful Lantern Trap—Oviposition in Young Forest Trees by *Tetraopes femoratus* Fab.—A Few Insects that have been Unusually Abundant in Colorado this Year—Notes on Insects of Norway and Sweden—Notes from Maryland on the Principal Injurious Insects of the Year—Notes on Some Little-known Insects of Economic Importance.

Revision of the Tachinidæ of America North of Mexico. A Family of Parasitic Two-winged Insects. By D. W. Coquillett. Pp. 154. (Technical Series, No. 7, Division of Entomology.) Price 10 cents.

CONTENTS: Nature and scope of the work—Habits of the family—Tachinid flies and their hosts—Classification—Terms used in describing Tachinidæ—Table of genera—Systematic arrangement of the genera—Synopses of the species—Index to genera and species.

Dairy Schools. By R. A. Pearson, B. S., Assistant Chief of Dairy Division. Under the direction of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry. Pp. 38, plates 4, figs. 2. (Bulletin No. 17, Bureau of Animal Industry). Reprint. Price 10 cents.

CONTENTS: Dairy instruction—Purpose of dairy schools—Method of conducting dairy schools—Equipment—Advantages of a dairy course—Advantages of dairy schools to the public—Appendix.

Notes on the Grasses and Forage Plants of Iowa, Nebraska, and Colorado. By L. H. Pammel, Professor of Botany in Iowa Agricultural College. Prepared under the direction of the Agrostologist. Pp. 47, figs. 12. (Bulletin No. 9, Division of Agrostology.) Price 5 cents.

CONTENTS: Field Notes and General Observations; Iowa, Nebraska, Colorado—List of the More Important Grasses and Forage Plants of Iowa, Nebraska, and Colorado, with Economic Notes—List of Grasses Collected in Iowa, Nebraska, and Colorado.

Asparagus Culture. By R. B. Handy, Division of Publications. Pp. 40, figs. 17. (Farmers' Bulletin No. 61.)

CONTENTS: Introduction—History—Botany and varieties—Production of plants from seed; saving seed; selection of plants—Selection and preparation of soils—Planting and cultivation—Manuring beds—Cost of an asparagus bed—Harvesting and marketing—Canning—Drying—Fungus diseases—Insect enemies: The common asparagus beetle; the twelve-spotted asparagus beetle.

Creameries or Butter Factories: Advantages, Location, Organization, and Equipment. By Henry E. Alvord, C. E., Chief of Dairy Division. Pp. i-iii, 297-316, figs. 2-4, plates XXXII-XXXVIII. (Reprint from Twelfth and Thirteenth Annual Reports of Bureau of Animal Industry.)

CONTENTS: The factory system—Starting a creamery—Construction and equipment—Appendix: A, Organization agreement; B, Articles of agreement of association; C, By-laws of cooperative creamery association; D, Creamery equipment.

North American Fauna No 13. Revision of the North American Bats of the Family Vespertilionidæ. By Gerrit S. Miller, jr. Prepared under the direction of Dr. C. Hart Merriam, Chief of Division of Biological Survey. Pp. 140, plates 3, figs. 40. [Actual date of publication, October 16, 1897.] Price 10 cents.

CONTENTS: Material changes in color of specimens preserved in alcohol—Sexual variation—Age variation—Geographic variation—Geographic distribution—Migration—Measurements—Illustrations—Nomenclature of North American vespertilionidæ—Lists of North American vespertilionidæ—Descriptions.

Recent Legislation on State Forestry Commissions and Forest Reserves. By B. E. Fernow, Chief of Division of Forestry. Pp. 15. (Circular No. 17, Division of Forestry.)

Catalogue of Fruits Recommended for Cultivation in the Various Sections of the United States. By the American Pomological Society. Revised by a Committee of the Society, T. T. Lyon, Chairman. Pp. 39, fig. 1. (Bulletin No. 6, Division of Pomology.) Price 5 cents.

CONTENTS: Introduction—Plan of Catalogue—Fruits mainly adapted to northern localities—Subtropical and tropical fruits—Native and introduced fruits and nuts grown in the open air—The society's rules for exhibiting and naming fruits.

A Bibliography of Poultry. Compiled by Emma B. Hawks, Cataloguer, under the direction of the Librarian. Pp. 32. (Library Bulletin No. 18.) Price 5 cents.

CONTENTS: General works—Periodicals—United States Government Publications—State Publications—Subject Index.

Report of Preliminary Investigations on the Metabolism of Nitrogen and Carbon in the Human Organism, with a Respiration Calorimeter of Special Construction. By W. O. Atwater, Ph. D., C. D. Woods, B. S., and F. G. Benedict, Ph. D. Pp. 64, figs. 4. (Bulletin No. 44, Office of Experiment Stations. Price 5 cents.

CONTENTS: Introduction—Apparatus—Methods of sampling and analysis—The experiments—Conclusions.

Some Common Poisonous Plants. By V. K. Chesnut, Assistant, Division of Botany, U. S. Department of Agriculture. Pp. i-ii, 137-146, figs. 24-28. (Reprint from the Yearbook of the Department of Agriculture for 1896.)

CONTENTS: General remarks—Poison ivy—The American water hemlock—The death cup.

Experiment Station Record, Vol. IX, No. 2. Pp. i-vi, 101-200. Price 10 cents.

The Record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experimental stations.

NOTE.—For the convenience of those who desire to receive this publication regularly the Superintendent of Documents has decided to fix the price per volume (12 numbers), beginning with Vol. VIII, at \$1, payable in advance.

Some Books on Agriculture and Agricultural Science—published 1893–1896. Compiled under the supervision of A. C. True, Ph. D., Director of Office of Experiment Stations and Bibliographer of Association of American Agricultural Colleges and Experiment Stations. Pp. 176. (Circular No. 31, Office of Experiment Stations.) Reprint. Price 10 cents.

The result of an effort made in the Office of Experiment Stations to follow up such literature on agriculture and agricultural science published during the past three or four years as could be collated from data at command. The list does not include Government reports or experiment stations publications, reports of State boards or associations, diaries, calendars, or annuals.

Losses in Boiling Vegetables and the composition and Digestibility of Potatoes and Eggs. By H. Snyder, B. S., Almah J. Frisby, M. D., and A. P. Bryant M. S. Pp. 31, figs. 7. (Bulletin No. 43, Office of Experiment Stations.) Price 5 cents.

CONTENTS: Loss of nutrients in boiling potatoes, carrots, and cabbage, by H. Snyder, B. S.—The digestibility of potatoes and eggs, by H. Snyder, B. S.—The composition of different parts of the potato and the loss of nutrients during the process of boiling, by Almah J. Frisby, M. D., and A. P. Bryant, M. S.

Proceedings of the Eleventh Annual Convention of the Association of Official Agricultural Chemists held at Washington, D. C., August 23, 24, and 25, 1894. Edited by Harvey W. Wiley, Secretary of the Association. Published by the authority of the Secretary of Agriculture. Pp. 403. (Bulletin No. 43, Division of Chemistry.) Reprint. Price 25 cents.

Proceedings of the Twelfth Annual Convention of the Association of Official Agricultural Chemists, held at Washington, D. C., September 5, 6, and 7, 1895. Edited by Harvey W. Wiley, Secretary of the Association. Pp. 172, figs. 2. (Bulletin No. 47, Division of Chemistry.) Reprint. Price 10 cents.

The Equations of Hydrodynamics in a Form Suitable to Problems Connected with the Movements of the Earth's Atmosphere. Prepared at the request of Willis L. Moore, Chief of Bureau. By Joseph Cottier, Columbia University. Folio. Pp. 8. (Weather Bureau No. 130.)

Marketing Farm Produce. By George G. Hill, formerly manager and editor of the American Farmer, Illinois. Pp. 28, figs. 7. (Farmers' Bulletin No. 62, Division of Publications.)

CONTENTS: Introduction—The trade in farm produce—General rules—Packing—The commission merchant—Particular directions: Butter, eggs, poultry and game, meats and potatoes, small fruits, fruits, vegetables, and honey.

Experiments with Sugar Beets in 1892. By Harvey W. Wiley, Chemist of the U. S. Department of Agriculture and Director of the Department Sugar Experiment Stations at Schuyler, Nebr.; Runnymede (Narcoossee P. O.), Fla., and Sterling and Medicine Lodge, Kans. With the Collaboration of Dr. Walter Maxwell, Assistant in Charge of the Schuyler Station. Pp. 74. (Bulletin No. 36, Division of Chemistry.) Reprint. Price 5 cents.

CONTENTS: Sugar beet seed distributed—Results of analyses of beets received—Data obtained from the several States—Work done at the Department station at Schuyler, Nebr.

Crop Report for October, 1897. By John Hyde, Statistician. Pp. 4.
(New series, Report No. 153, Division of Statistics.)

CONTENTS: Crop conditions—Average condition of growing crops—The foreign crop situation—Tabular statement showing by States average yield per acre and average condition of crops October 1, 1897.

Monthly Weather Review. August, 1897. Vol. XXV, No. 8. Pp. 339-379, charts 6. (Weather Bureau.) Price 10 cents.

Charts of the Weather Bureau—

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall with special reference to their effect on crops. No. 30, for the month of October, 1897.

Daily Weather Map showing weather conditions throughout the United States and giving forecasts of probable changes.

Monthly List of Publications. September, 1897. Pp. 4. (No. 243, Division of Publications.)

A list of the publications issued during the current month by the United States Department of Agriculture.

NOTES REGARDING DEPARTMENT PUBLICATIONS.

All copies of the **serial, scientific, and technical** publications of the U. S. Department of Agriculture not required for official use are by law* turned over to the Superintendent of Documents, who is empowered to sell them at cost. Applications for such publications should therefore be made to—

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He is not, however, allowed to sell more than one copy of any public document to the same person, and remittance should always be made to him and not to this Department. **Do not send checks or stamps.**

Farmers' Bulletins are for **free distribution**, being issued under a special provision in the act making appropriation for the Department of Agriculture. Two-thirds of all copies printed are for distribution by Senators, Representatives, and Delegates in Congress, and the remainder are for the use of the Department. Applications therefor may be made to Members of Congress or to the Secretary of Agriculture.

Circulars of information are also of a popular character and are intended for **free distribution**. Applications therefor should be made to the Secretary of Agriculture, Washington, D. C.

The **Yearbook** of the Department of Agriculture is published for free distribution through Senators, Representatives, and Delegates in Congress. The Department's small quota is only sufficient to supply its regular correspondents.

The **Monthly List of Publications**, issued on the first of each month, will be mailed to all who apply for it. In it a brief synopsis is given of each publication; also the price as fixed by the Superintendent of Documents, if for sale by him.

All application for **publications of the Weather Bureau** should be made to that Bureau, remitting the price where a price is quoted.

The Department has no list to whom all publications are sent.

GEO. WM. HILL,

Chief of Division.

* SECTION 67.—All documents at present remaining in charge of the several Executive Department, bureaus, and offices of the Government, not required for official use, shall be delivered to the Superintendent of Documents, and hereafter all public documents accumulating in said Departments, bureaus, and offices not needed for official use shall be annually turned over to the Superintendent of Documents for distribution or sale.

United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

Washington, D. C., November 30, 1897.

MONTHLY LIST OF PUBLICATIONS.

[November, 1897.]

(See accompanying notes regarding Department publications.)

Instructions for use of Aneroid Barographs on the Great Lakes.
Prepared under the direction of Willis L. Moore, Chief of Weather Bureau. Pp. 7, fig. 1. (Bulletin No. 132, Weather Bureau.)

This publication is for the exclusive use of Weather Bureau officials at their various stations on the Great Lakes, and instructs them how to manage the barographs in use by them so as to get the best results.

Proceedings of the Eighth Annual Convention of the Association of Official Agricultural Chemists, held at the Columbian University, Washington, D. C., August 13, 14, and 15, 1891. Methods of Analysis of Commercial Fertilizers, Foods, and Feeding Stuffs, Dairy Products, Fermented Liquors, and Sugars. Edited by Harvey W. Wiley, Secretary of the Association. Published by authority of the Secretary of Agriculture. Pp. 253, figs. 8. (Bulletin No. 31, Division of Chemistry.) Reprint. Price 15 cents.

Proceedings of the Thirteenth Annual Convention of the Association of Official Agricultural Chemists, held at Washington, D. C., November 6, 7, and 9, 1896. Edited by Harvey W. Wiley, Secretary of the Association. Pp. 127, figs. 5. (Bulletin No. 49, Division of Chemistry.) Reprint. Price 10 cents.

Methods of Analysis Adopted by the Association of Official Agricultural Chemists, September 5, 6, and 7, 1895. Edited by Harvey W. Wiley, Secretary, with the collaboration of L. L. Van Slyke and W. D. Bigelow, editorial committee. Pp. 84, figs. 4. (Bulletin No. 46, Division of Chemistry.) Reprint. Price 5 cents.

Notes on Peach Culture. By J. H. Hale, Connecticut. Pp. 8, figs. 4. (Circular No. 3, Division of Pomology.) Revised edition.

The subject of peach cultivation is treated in this circular by a man who has had long experience. He covers the subject from planting the trees to gathering the fruit and packing it for market. It is designed to serve the farmer who possesses but a few trees as well as the orchardist.

Austria-Hungary as a Factor in the World's Grain Trade; Recent Use of American Wheat in that Country. By F. H. Hitchcock, Chief of the Section of Foreign Markets. Pp. 23. (Circular No. 19, Section of Foreign Markets.)

Shows the changes in the trade relations of Austria-Hungary as an exporter and importer of grain.

Prune Culture in the Pacific Northwest. By E. R. Lake, Oregon. Pp. 7, figs. 3. (Circular No. 2, Division of Pomology.) Revised edition.

Report of the Secretary of Agriculture. 1897. Pp. 54. Preliminary.

In his preliminary report to the President, the Secretary treats of the following subjects, as well as a great many others appertaining to the work of the Department: Objects of the Department—Scope of the Department work—Animal products and foreign markets—Experiments with sugar beets—Opportunities for new industries—Advance in seed distribution—Need of qualified agents in foreign countries—Grasses and forage plants—The Department scientists and their work—The world's markets for farmers—Experimental exports of butter—The problem of the farmer's home.

Directions for the Pasteurization of Milk. Pp. 1, figs. 2. (Circular No. 1, Bureau of Animal Industry.) Revised edition.

The proper pasteurization of milk has long been demonstrated as of inestimable value in the use of that article of food, particularly for children, and this circular gives such plain directions that anyone can follow them.

Rainfall of the United States, with Annual, Seasonal, and Other Charts. Prepared under the direction of Willis L. Moore, Chief of the Weather Bureau. By Alfred J. Henry, Chief of Division. Pp. 58, charts 11, pls. 3. (Bulletin D, Weather Bureau.) Quarto.

This is a report of the Weather Bureau as to the rainfall of the United States, based upon reliable registers in various localities throughout the country. The averages have been compiled to the end of 1896. The rainfall of the crop-growing season has received separate treatment, thus making it much more convenient to secure the information that will prove of most value to the agriculturist.

Report of the Statistician for 1897. By John Hyde. Pp. i-ii, 219-224. (Reprint from the Report of the Secretary of Agriculture for 1897.)

Care of Milk on the Farm. By R. A. Pearson, B. S., Assistant Chief of Dairy Division, Bureau of Animal Industry. Pp. 40, figs. 9. (Farmers' Bulletin No. 63, Bureau of Animal Industry.)

Among the various topics presented are the following: Impure milk unprofitable—How milk becomes impure—Spread of infectious diseases—Uncleanliness in the stable—Dirt from the cows—Untidy attendants—Uncleanliness outside the stable—How to keep milk pure—The herd—Construction of the stable—The dairy house—Utensils—Water—Milking—Straining—Cooling of milk—Skimming of milk on the farm—Hauling to the factory—Fifty dairy rules.

Ducks and Geese: Standard Breeds and Management. By George E. Howard, Secretary of National Poultry and Pigeon Association. Pp. 48, figs. 37. (Farmers' Bulletin No. 64, Bureau of Animal Industry.)

CONTENTS: STANDARD BREEDS OF DUCKS: White Pekin—White Aylesbury—Colored Rouen—Black Cayuga—Colored and White Muscovy—Gray and White Call—Black East Indian—Crested White. MANAGEMENT: Starting a plant—Buildings for breeding ducks—Brooding houses; supplying water—Feeding—Mixing feed—How much to feed—Oyster shells and grit—Killing and dressing for market—Development of the duckling in the egg—Natural incubation—Artificial incubation. STANDARD BREEDS OF GEESE: Gray Toulouse—White Embden—Gray African—Brown and White Chinese—Gray Wild—Colored Egyptian. MANAGEMENT: Mating and setting—Feeding and dressing for market—Cross breeding.

Crop Report for November, 1897. By John Hyde, Statistician. Pp. 4. (New series, Report No. 154, Division of Statistics.)

Includes estimates of the yield of corn, buckwheat, Irish potatoes, tobacco, hay, and cotton, giving for purposes of comparison the yields of last year. Considerable space is devoted to a review of the foreign crop situation.

Publications of the U. S. Department of Agriculture for sale by the Superintendent of Documents, Union Building, Washington, D. C. Corrected to October 1, 1897. Pp. 28. (No. 179, Division of Publications.) Revised edition.

This is a list of the publications of this Department to which a price is affixed, and which are for sale by the Superintendent of Documents. The list comprises, besides the publications turned over to him, other bulletins and reports of the Department which have come into his possession from various sources.

List of Bulletins and Circulars Issued by the U. S. Department of Agriculture and Available for Free Distribution. Corrected to November 1, 1897. Pp. 16. (No. 247, Division of Publications.)

A list of all the publications issued by the Department that are for free distribution.

Monthly Weather Review. September, 1897. Vol. XXV, No. 9. Pp. 381-424, charts 8. (Weather Bureau.) Price 10 cents.

Charts of the Weather Bureau—

Meteorological Charts of the Great Lakes. Normal data for November and December, 1897. Size 20 by 25 inches.

Daily Weather Map showing weather conditions throughout the United States and giving forecasts of probable changes.

Monthly List of Publications. October, 1897. Pp. 4. (No. 245, Division of Publications.)

A list of the publications issued during the current month by the United States Department of Agriculture.

NOTES REGARDING DEPARTMENT PUBLICATIONS.

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Please advise the Department of any change of address.

The Department has no copies of the Horse Book or the Cattle Book.

The Superintendent of Documents has copies of the Yearbook for sale, as follows: Yearbook 1894, 50 cents; Yearbook 1895, 55 cents; Yearbook 1896, 50 cents.

United States Department of Agriculture,

DIVISION OF PUBLICATIONS.

WASHINGTON, D. C., December 31, 1897.

MONTHLY LIST OF PUBLICATIONS.

[December, 1897.]

(See accompanying notes regarding Department publications.)

Annual Reports of the Department of Agriculture for the Fiscal Year Ended June 30, 1897. Report of the Secretary of Agriculture. Miscellaneous Reports. Pp. liv, 226. (Congressional.)

Contains annual report of the Secretary of Agriculture to the President, also reports of the chiefs of the various bureaus, divisions, and offices of the Department of Agriculture for the fiscal year 1897 to the Secretary of Agriculture.

Meadows and Pastures: Formation and Cultivation in the Middle Eastern States. By Jared G. Smith, Assistant Agrostologist. Pp. 24, figs. 9. (Farmers' Bulletin No. 66, Division of Agrostology.)

This bulletin deals particularly with the preparation and cultivation of meadows and pastures in the Middle Eastern States, but the information contained therein will be found of value to producers of forage crops elsewhere. The principal topics are as follows: General prevalence and commercial value of grasses—Grasses as soil builders—Fertilizers for grass lands—Methods of preparing the soil—Sowing the seed—Varieties of grasses and clovers to plant—Some grass mixtures.

The Mechanics of Soil Moisture. By Lyman J. Briggs, Physicist, Division of Soils. Pp. 24, figs. 7. (Bulletin No. 10, Division of Soils.) Price 5 cents.

A technical discussion of the relation of soils to water, having special reference to the cause of the capillary movement of the water and the bearing of the same on the crops grown.

Mosquitoes and Fleas. By L. O. Howard, Entomologist. Pp. 5. (Circular No. 13, second series, Division of Entomology.) Revised edition.

Gives the life histories of these household pests, with suggestions for the amelioration of the annoyance they cause.

Canaigre (*Rumex hymenosepalus*). By A. C. True, Director. Pp. 4, fig. 1. (Circular No. 25, Office of Experiment Stations.) Revised edition.

Gives a description of the plant, with amount of tannin obtained by analysis of roots grown in several States; localities where canaigre has been successfully produced; manner of planting and method of cultivation; preparation for market; value per ton of the green product.

The Jack Rabbits of the United States. By T. S. Palmer, M. D., Assistant Chief, Biological Survey. Pp. 88, pls. 6, figs. 3. (Bulletin No. 8, Division of Biological Survey.) Revised edition. Price 10 cents.

The objects of this bulletin are: (1) to give a general account of the distribution and habits of the various species found in the United States; (2) to show the methods which have been used to exterminate the animals and to protect crops from their depredations; and (3) to bring together facts and figures concerning the economic uses of rabbits in general, for the purpose of indicating how our native species may be more generally utilized.

The Renewing of Worn-out Native Prairie Pastures. By Thomas A. Williams, Assistant Agrostologist. Pp. 4, figs. 4. (Circular No. 4, Division of Agrostology.) Revised edition.

Makes suggestions as to the treatment of prairie pastures that have been worn out or carelessly handled, and gives descriptions and illustrations of several kinds of grasses that have been proven to be best adapted to their successful renovation.

Broom Corn (*Andropogon sorghum vulgaris*). By A. C. True, Director. Pp. 4. (Circular No. 28, Office of Experiment Stations.) Revised edition.

This circular describes some of the varieties of broom corn most commonly grown; makes suggestions as to the most suitable manure to use; tells how to plant, cultivate, harvest, and cure; shows its feeding value as compared with Indian corn; and gives advice to those who contemplate growing it for market.

Report of Committee on Methods of Teaching Agriculture. By A. C. True, Director. Pp. 20. (Circular No. 32, Office of Experiment Stations.) Revised edition.

Second Report of the Committee on Methods of Teaching Agriculture. By A. C. True, Director. Pp. 4. (Circular No. 37, Office of Experiment Stations.) Revised edition.

Brief progress reports of a committee appointed by the Association of American Agricultural Colleges and Experiment Stations, showing the lack of a standard of collegiate education in agriculture in this country, and urging the necessity of a more definite nomenclature of the branches of agricultural education.

Accessions to the Department Library, July–September, 1897. Pp. 25. (Library Bulletin No. 19.) Price 5 cents.

Observations on Recent Cases of Mushroom Poisoning in the District of Columbia. By F. V. Coville, Botanist. Pp. 21, figs. 21. (Circular No. 13, Division of Botany.)

Deals with the most common varieties of mushrooms found in the District of Columbia, describes the edible and nonedible ones and gives illustrations of same.

Methods and Results of Investigations on the Chemistry and Economy of Food. By W. O. Atwater, Ph. D., Professor of Chemistry in Wesleyan University, Director of the Storrs (Conn.) Agricultural Experiment Station, and Special Agent of the United States Department of Agriculture. Pp. 222, charts 3, figs. 15. (Bulletin No. 21, Office of Experiment Stations.) Reprint. Price 15 cents.

CONTENTS: Introduction—Food and its uses for nutriment—Composition of food materials—The digestibility of food—Preparation and cooking of food—Uses of food in the body—Metabolism of energy—Pecuniary economy of food—Food consumption—Standards for dietaries—Errors in our food economy.

Experiment Station Record, Vol. VIII, No. 12. (Index.) Pp. 1037-1128, i-xiv. Price 10 cents.

Experiment Station Record, Vol. IX, No. 3. Pp. vi, 201-300. Price 10 cents.

The Record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries; articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations.

NOTE.—For the convenience of those who desire to receive this publication regularly the Superintendent of Documents has decided to fix the price per volume (12 numbers) beginning with Vol. VIII, at \$1, payable in advance.

Recent Legislation on State Forestry Commissions and Forest Reserves. By B. E. Fernow, Chief of Division of Forestry. Pp. 16. (Circular No. 17, Division of Forestry.) Revised edition.

A summary of the laws of States which have recently legislated upon the subject of forestry commissions and forest reserves.

Cowpeas (*Vigna catjang*). By Jared G. Smith, Assistant Agrostologist. Pp. 10. (Circular No. 5, Division of Agrostology.) (Reprinted from the Yearbook for 1896.)

Gives a brief history of this plant, shows its great value as a soil renovator and as a food for swine and cattle, tells what fertilizers to use, and how to cultivate the plant and harvest the seed.

Monthly list of Publications. November, 1897. Pp. 4. (No. 252, Division of Publications.)

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PUBLICATIONS OF THE WEATHER BUREAU.

(For the maps and bulletins of the Weather Bureau, requests and remittances should be directed to the Chief of that Bureau.)

United States Daily Atmospheric Survey. By Willis L. Moore, Chief of Weather Bureau. Pp. 6. (Weather Bureau, No. 138.) Price 5 cents.

Relates to the desirability of establishing kite stations at twenty or more places in order to obtain data of temperature, pressure, humidity, and wind velocity at an elevation of one mile or more above the earth's surface, and using same in connection with readings of the instruments now operated, for the purpose of understanding more accurately the development of storms and cold waves.

Monthly Weather Review. October, 1897. Vol. XXV, No. 10. Pp. 425-470, charts 6. (Weather Bureau.) Price 10 cents.

Charts of the Weather Bureau—

Snow and ice charts for Monday, December 6, 13, 20, 27.

(These charts are issued weekly on Tuesdays during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected voluntary observers.)

Climate and Crop Bulletin (series of 1897), reporting temperature and rainfall, with special reference to their effect on crops. (No. 31, for the month of November, 1897.)

Daily Weather Map showing weather conditions throughout the United States and giving forecasts of probable changes.

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